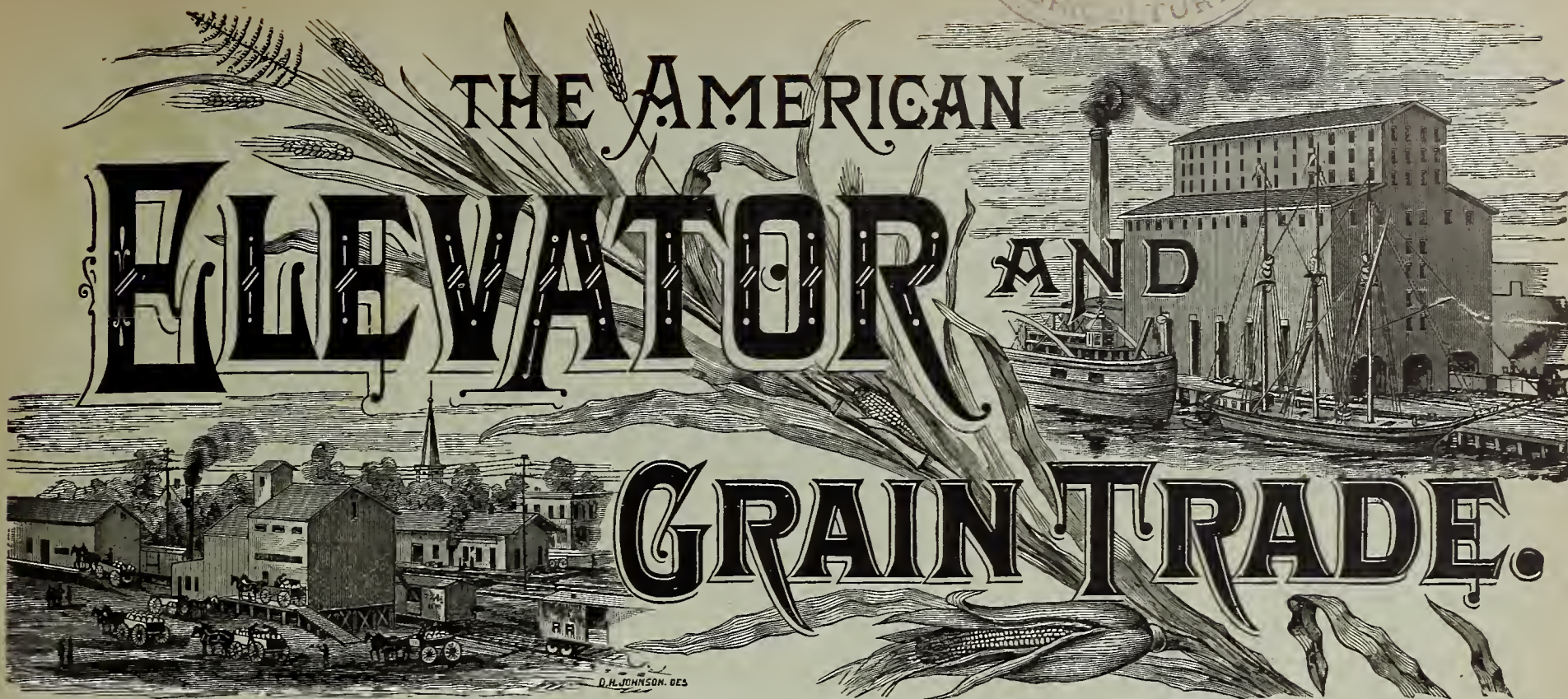


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XIII.

CHICAGO, ILLINOIS, OCTOBER 15, 1894.

No. 4.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS,
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

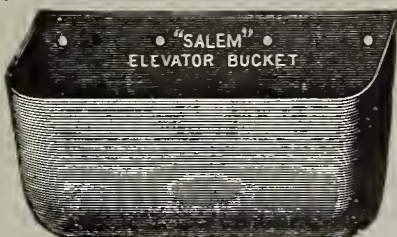
E. H. PEASE MFG. CO., RACINE, WISCONSIN.

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Tread" Horse Powers,
Elevator "Boots," "Heads," "Buckets,"
FEED GRINDERS,
Special Flax Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts,
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

ADDRESS

GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS



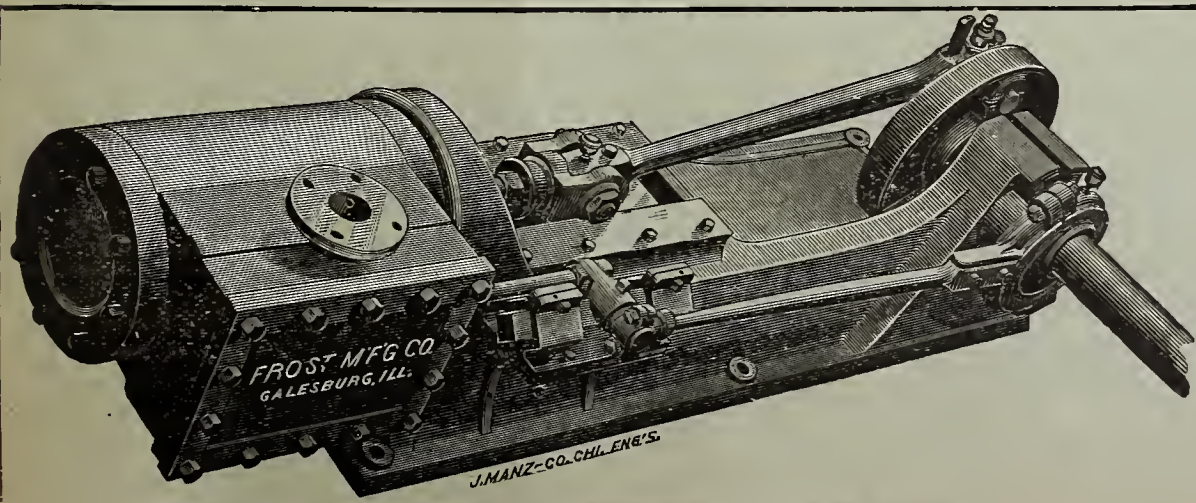
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS

BELTING AND ROPE TRANSMISSION

SEND FOR CATALOGUE

THORNBURGH
MFG. CO.

110 Jefferson Street
CHICAGO, ILL.



FOR PRICES AND DISCOUNTS
— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
EITHER STEAM OR HORSE-POWER,
ADDRESS
The FROST MFG. CO.,
GALESBURG, ILL.

NOTICE.

Important Decision Affecting Elevator Owners and Builders.

The Hon. Judge Grosscup of the Circuit Court of the United States for the Northern District of Illinois, on May 9, 1894, sustained the validity of the dust collector patents known as the "CYCLONE," and ordered a permanent writ of injunction against the defendants.

Infringing machines involved in these suits were built by the Vortex Dust Collector Co. of Milwaukee, and the Huyett & Smith M g. Co. of Detroit, Mich, who themselves assumed and conducted the defense, through their own attorneys. IF YOU HAVE USED, OR ARE USING INFRINGING MACHINES, YOU CAN SAVE MONEY BY PROCURING A LICENSE AT ONCE AND THUS AVOID LAW SUITS. We must and will call a halt on pirates and users of piratical machinery, and we warn the trade thus frankly and publicly against the manufacture, sale or use of infringing machines, and it will be our duty to prosecute such infringements of our rights to the fullest degree and in the promptest manner.

The Knickerbocker Co., - Jackson, Mich.

A Wonderful Machine.

WEST JEFFERSON STEAM FLOURING MILLS,

WEST JEFFERSON, OHIO, April 11, 1894.

RICHMOND MFG. CO., Lockport, N. Y.

GENTLEMEN:—Inclosed find check, covering bill of March 10, in full. The No. 0 Horizontal Adjustable Scourer and Polisher with Revolving Scouring Case is a wonderful machine, and we are more than pleased with its work. We have cleaned all kinds of wheat and must say that it cleans beyond our expectations.

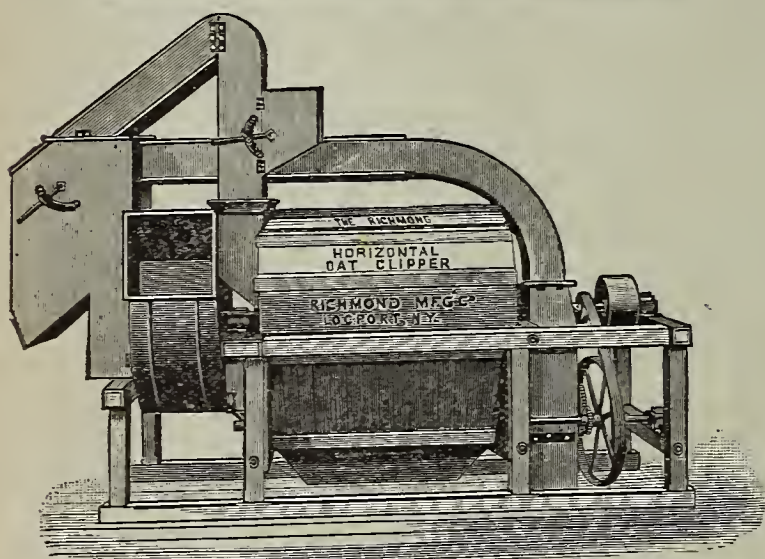
Yours very truly, JOHN RENNER.

The Richmond Grain Cleaning Machinery and Dusters.

RICHMOND MANUFACTURING CO.,

LOCKPORT, N. Y., U. S. A.

Write for Catalogue.

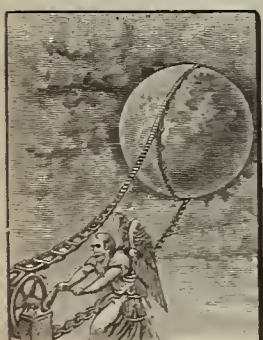


The Richmond Horizontal Adjustable Oat Clipper with Revolving Case.

Link-Belt Machinery Co.,

ENGINEERS, FOUNDERS, MACHINISTS,

CHICAGO, ILL., U. S. A.



MANUFACTURE

- Shafting, Shaft Bearings, Pulleys, Gearing, Friction Clutches, Etc.
- Manilla Rope Power Transmissions.
- Standard Water Tube Safety Boilers.
- Original Ewart Detachable Link Belting.
- The Clark Power Grain Shovel.
- Belt Conveyors and Trippers.
- Savage & Love Patent Controllable Wagon Dump.

NEBRASKA CITY, NEB., May 16, 1894.

CHICAGO AUTOMATIC SCALE CO., CHICAGO, ILL.:

Gentlemen:—Please ship to our address at Hamburg, Iowa, an Automatic Scale, same as we ordered of you some time ago. This Scale is doing good work and we want another for our mill at Hamburg. Send the invoice and notice of shipment to us here. Execute the order as promptly as possible.

Yours truly,

THEO. BEYSCHLAG, Mgr.



Porter Iron Roofing and Corrugating Co.,

19 Race Street, CINCINNATI, OHIO.

Manufacturers of all kinds of IRON and STEEL ROOFING and SIDING.

The Pioneers of the Metal Roofing Business in the United States. We guarantee satisfaction. We ship promptly. Give us a trial order, and we will sell you more.

When writing for our prices and Illustrated Catalogue, please mention the ELEVATOR AND GRAIN TRADE.

GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

Such as:

**"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.**

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE SPOUTS.
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.

—ALL SIZES OF—

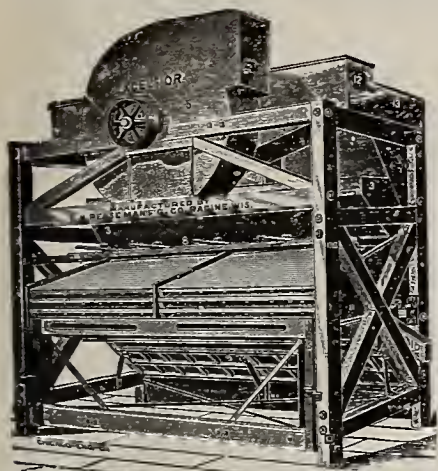
FARM AND WAREHOUSE FANNING MILLS.

GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

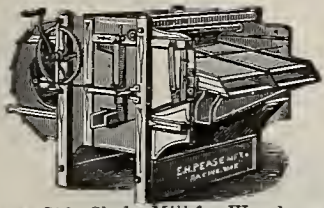
**Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,**

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.

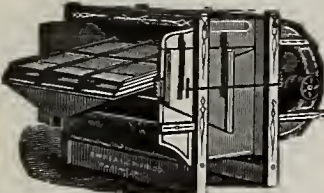
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



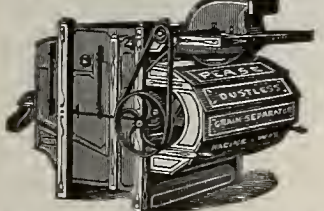
EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.



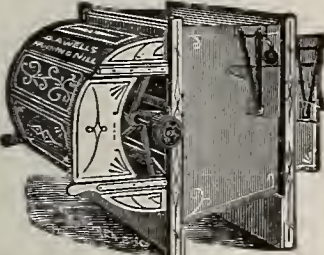
Pease Side-Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.



Pease Dustless Separator for Warehouses and Mills.



"Wells" Warehouse Mill.—Extra Large Capacity.

IT WILL PAY

YOU

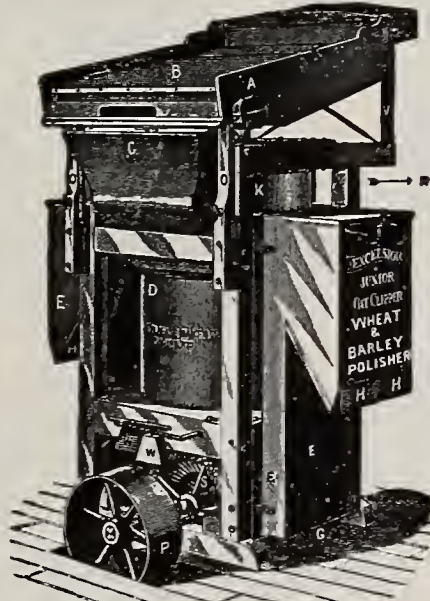
TO GET OUR

CATALOGUES

PRICES

AND PROOFS OF
SUPERIORITY

BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR

Oat Clipper, and Wheat and Barley Polisher, is the Simplest, Most Compact, **LIGHTEST** Running, Quickest Adjustable Machine of its kind made

WE FULLY WARRANT

THE

SUPERIORITY

OF THE

**MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities**

OF ALL OUR

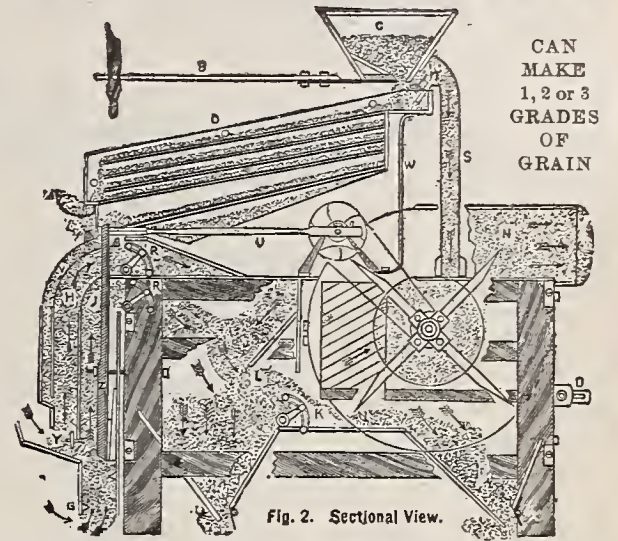
MACHINERY.

ADDRESS

—ALL—

LETTERS CAREFULLY

—TO—

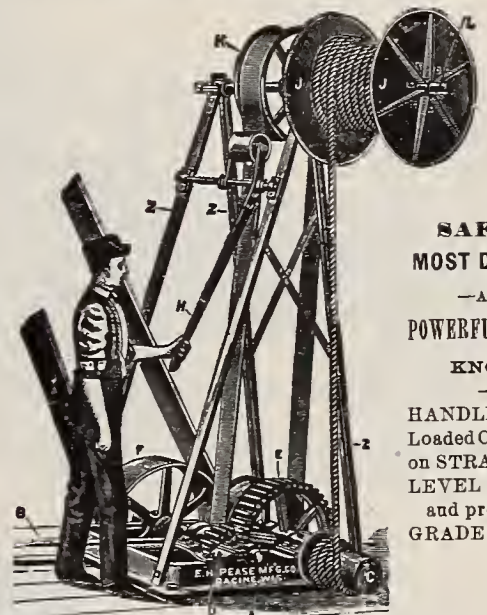


CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

The Finest Wheat or Barley Machine on Earth



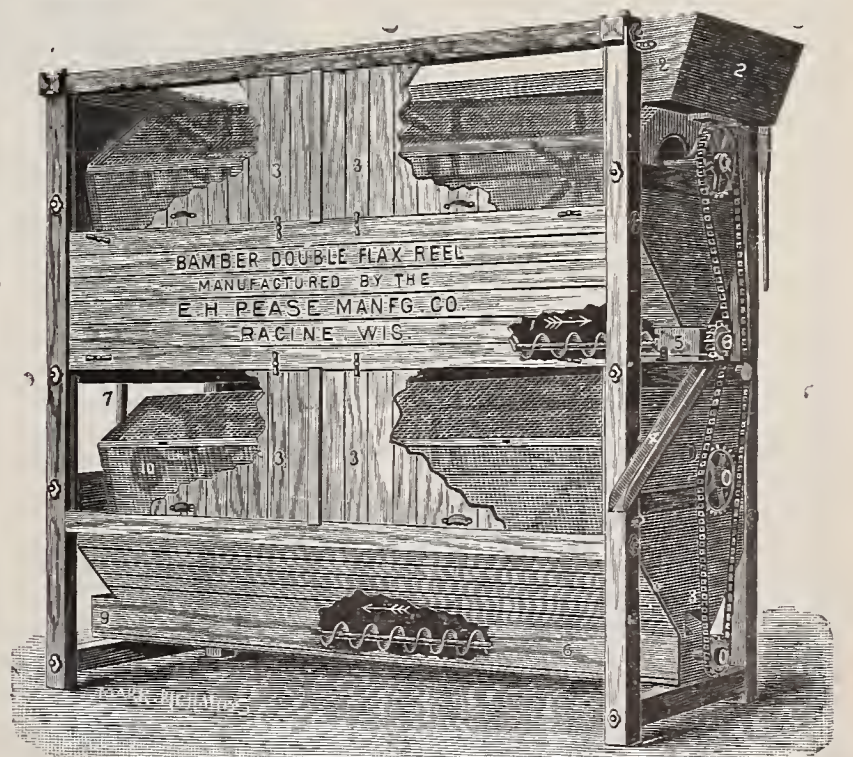
**SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.**

HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES

"HERCULES" POWER CAR PULLER.

OUR FLAX REELS

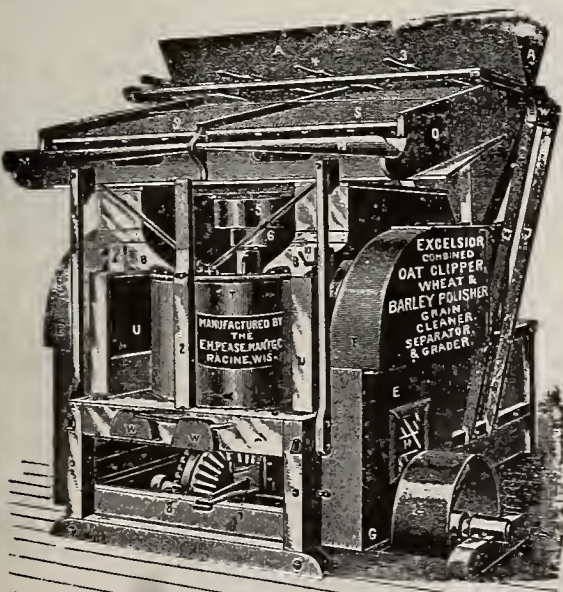
Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe."

Reels of any desired style or dimensions made to order.

The Successful Combination of 3 MACHINES IN ONE,



EXCELSIOR COMBINED

Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

BRANCH OFFICE, No. 6 CORN EXCHANGE, MINNEAPOLIS, MINN.

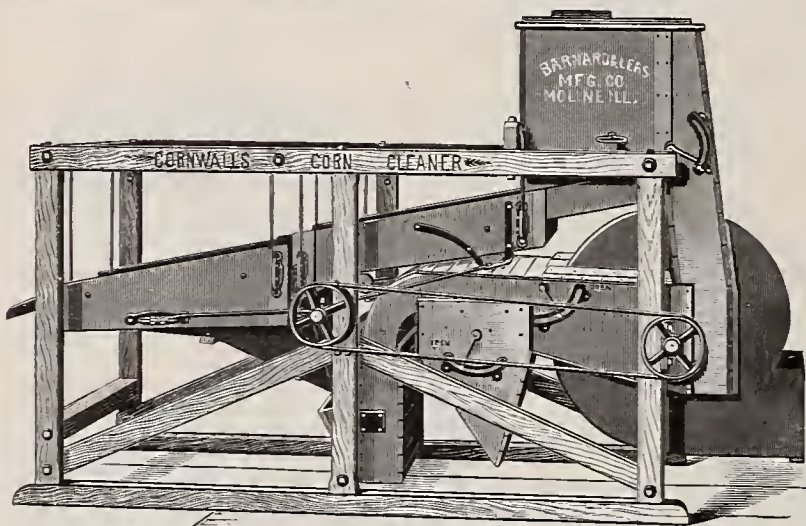
BARNARD & LEAS MANUFACTURING CO., MOLINE, ILLINOIS.

Sole Manufacturers of Barnard's Grain Cleaning Machinery.

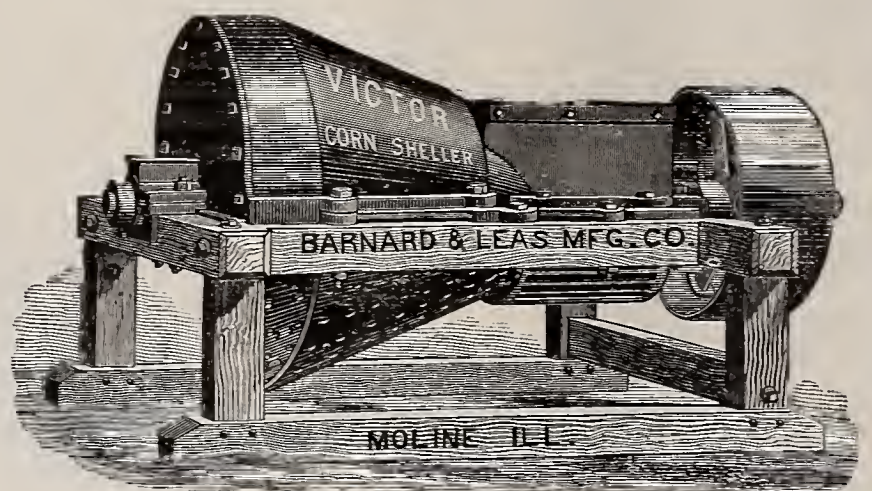
See these machines at work before purchasing.

The Barnard Grain Cleaning Machinery is built in a greater number of sizes, in a greater number of styles, and for a greater variety of uses in the mill and elevator than any other.

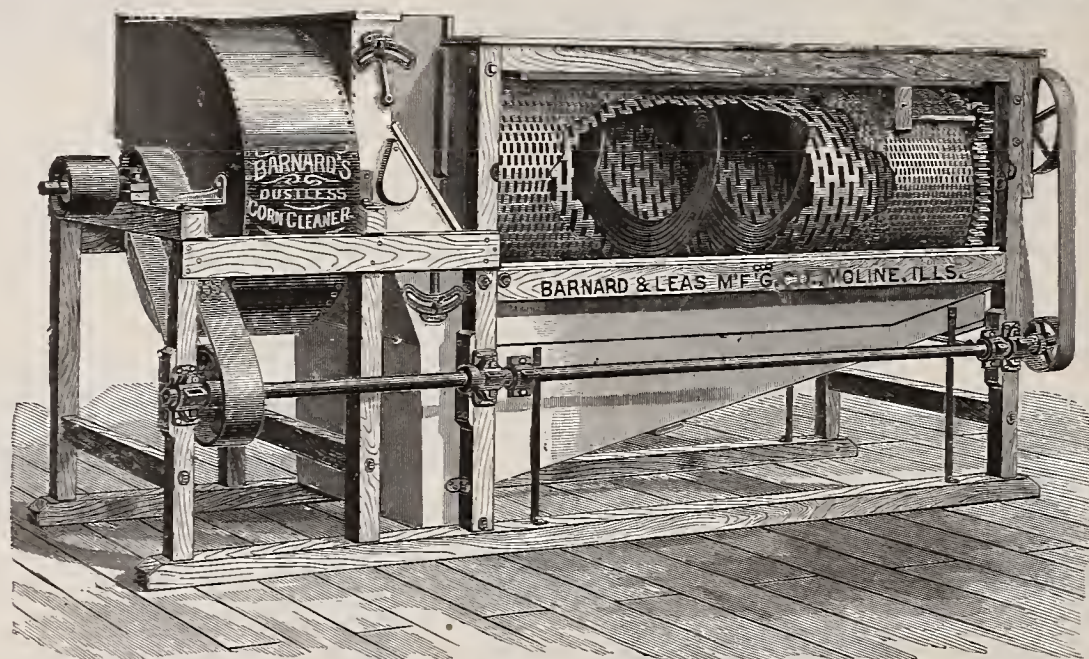
105 Barnard Cleaners were sold during the month of June for mills to be built and remodeled by us, for Elevators and Warehouses and incidental sales.



Cornwall Corn Cleaner.



Corn Sheller.



Double Screen Corn Cleaner.

SEND FOR SPECIAL CATALOGUE OF ELEVATOR MACHINERY.

OUR AGENTS:

M. M. SNIDER, 1325 Capitol Avenue, Des Moines, Iowa,
General Agent Iowa and Nebraska.

J. M. ALLEN, Fergus Falls, Minn.,
General Agent Minnesota, North and South Dakota.

J. F. PAYNE, Indianapolis, Ind., Room 3 Chamber of Commerce,
General Agent Indiana and Eastern Ill.

LEGRAND PAYNE, Indianapolis, Ind.,
Asst. Agent Ind., Eastern Ill.

G. M. RANDALL, Enterprise, Kan.,
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WATEROUS ENGINE WORKS CO.,
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Asst. Agent for Missouri, Arkansas and Texas.

W. H. CALDWELL, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.

H. R. STAGGS, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.

W. B. TALLEY, Paducah, Ky.,
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General Agent Utah and States West.

E. D. CAIRL, Colesburg, Iowa,
General Agent for Wisconsin.

CHAS. E. MANOR, P. O. Box 5, Stanleyton, Page Co., Va.,
General Agent for Virginia, W. Virginia, Maryland
and North Carolina.

WM. R. DELL & SON, London, England.

EUREKA



Grain Cleaning Machinery

THE GREATEST VARIETY
THE LARGEST CAPACITY
THE LARGEST NUMBER AT WORK } IN THE WORLD.

THE NEW IMPROVED *Eureka*

*BY Far the
Best Separator
on the Market.*

We make every part of this machine
under our own

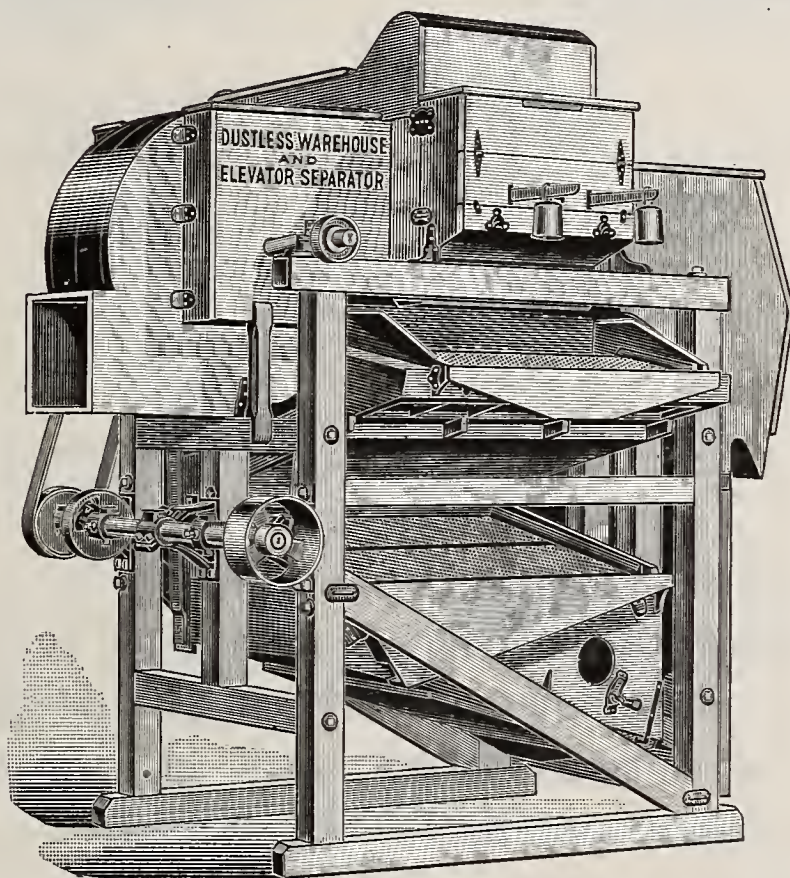
PERSONAL SUPERVISION,

and are thus in a position to guarantee
it as to material and workmanship.

Will positively do more and better
work than any other Separator.

Wide Suction.
Perfect Separation under Control.
Interchangeable Screens.
Large Cockle Screen.
Automatic Feed.

Will run perfectly smooth and quiet.
Has large capacity.



WILL SHIP ONE ON 30 DAYS' TRIAL.

*Warehouse
and
Elevator
Separator,*

WITH LATERAL-SHAKE
MOVEMENT
OF SCREENS.

Conceded by all to be the best arrangement for
ridding grain of impurities. Has Counter balances
and new Pitman Drive.

READ WHAT USERS SAY OF THEM:

CLYDE, N. Y., May 21, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—I enclose you check for \$..... to
balance account for the Eureka Warehouse Separ-
tor. I take pleasure in informing you that I am
much pleased with the machine, which has done
good work from the start.

Yours truly, GEO. B. GREENWAY.

YORK, PA., July 18, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—We are in receipt of your favor of
the 16th. The Warehouse and Elevator Separator
sold us by you is giving us great satisfaction. We
are not in the habit of recommending any ma-
chines, but must speak well of this one.

Yours truly, P. A. & S. SMALL.

Address **S. HOWES, Silver Creek, New York,**
SOLE BUILDER.

GRAIN CLEANERS.

IF YOU ARE IN NEED OF A PERFECT GRAIN
CLEANER, WE OFFER YOU

The Monitor Separator

These machines have stood the test and are pronounced by leading elevator operators superior to anything heretofore used. Their opinions are based on actual experience.

Nearly all of the leading cleaning elevators built during the last four years have adopted

THE MONITOR

They are simple, yet perfect in construction and durable.

They do the maximum of work with the minimum of power.

They have a powerful, but perfectly controlled air current.

They can be quickly adjusted to do any class of work desired.

They will give you grand satisfaction.

They are modern machines, and you will find them in all of the modern cleaning houses.
If you are interested in this line we ask you to investigate.

BARLEY.

We are making a special **BARLEY CLEANER**
that stands at the head.

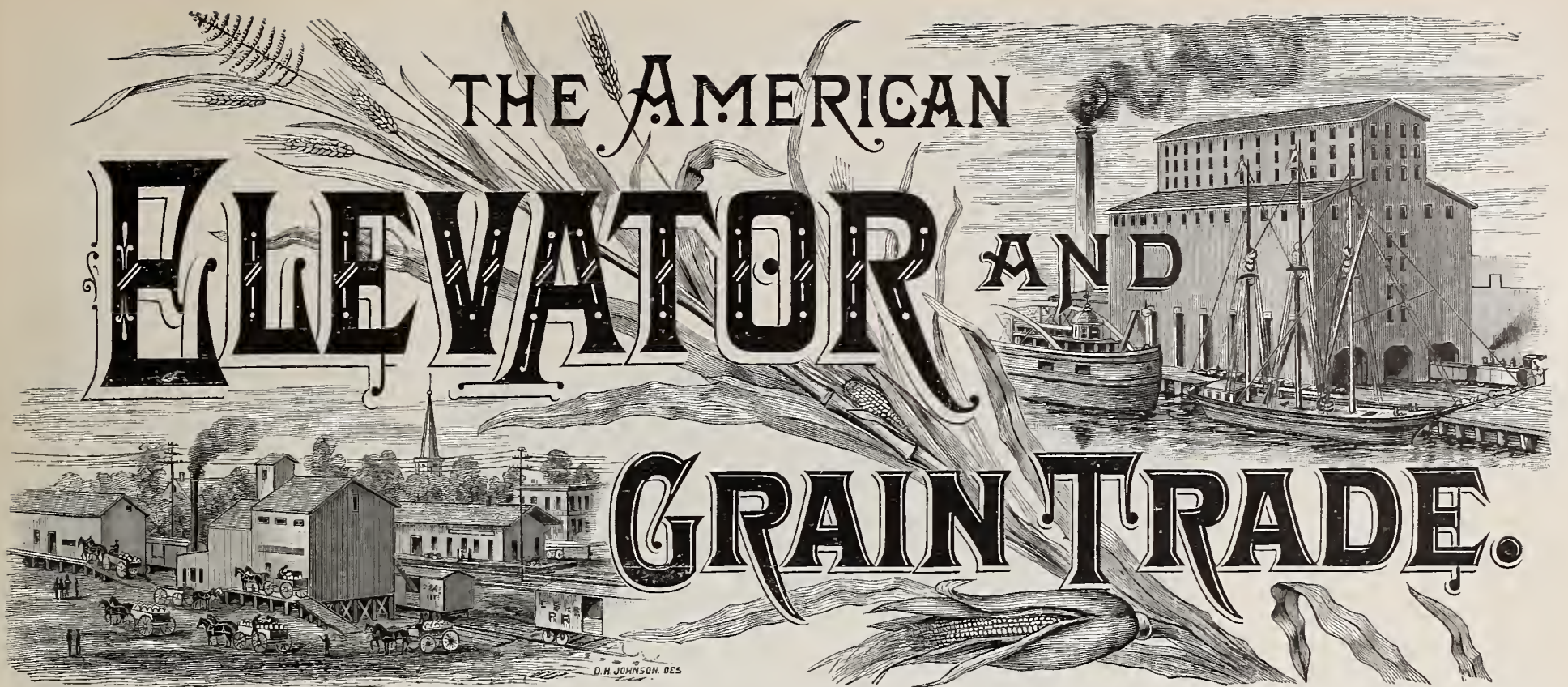
FLAX.

Our **Monitor Flax Cleaner** will give you good
results. Close work with large capacity.

Huntley, Cranson & Hammond

SILVER CREEK, N. Y.

B. F. RYER, GENERAL AGENT, 799 MONROE STREET, CHICAGO.



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CHICAGO, ILLINOIS, OCTOBER 15, 1894.

No. 4.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

NOVOROSSISK AND ITS FACILITIES FOR HANDLING GRAIN.

Russia has been a large producer of grain for years, and has always been considered our most important competitor in the grain markets of the world. Despite the fact that the government has ignored the needs of its internal commerce and sacrificed everything to the supposed needs of the army and the protection of the country, the grain trade has received considerable attention at the hands of private corporations, and much has been done to facilitate the transporting of grain to the seaboard, to reduce the cost of properly storing at the seaboard and to lessen the time required to load.

Greater improvement has been made recently at Novorossisk in the facilities for the storing and

grain were exported from Novorossisk, in 1889 304,751 tons, in 1890 484,640, and during the twelve months ending May 1, 1894, the exports included 16,536,382 pounds (of 36 pounds each) of wheat, 1,346,199 of rye, 4,202,807 of barley, 1,007,081 of oats, 580,121 of maize, 3,629,827 of flax, 218,964 of rape seed and 416,345 of miscellaneous grains. The large percentage of foreign matter in the grain exported during the twelve months named shows the need of a few good American cleaning machines. The winter wheat contained 8.60 per cent. of rye, .17 of barley and 1.42 of refuse. The spring wheat contained .22 per cent. of winter wheat, .32 of rye, 1.73 of barley and .61 of refuse. The rye contained 12.11 per cent. of winter wheat, .22 of barley and 2.73 of refuse. The barley was badly adulterated: it contained 1.04 per cent. of oats, .17 of fodder grass seeds, .55 of winter wheat, .03 of

ashlar masonry. At the end of each building is an office. There are a number of these warehouses. At first all the grain was handled by manual power, but the trade grew to such proportions that it became necessary to add machinery.

Towers were constructed, 80x27x45 feet, for elevators, and subterranean galleries were made for belt conveyors. Each tower has five stories and a basement, 20 feet 8 inches deep. It contains one conveyor crossing the basement to transfer grain from the receiving spouts to the elevators. Two elevators take the grain from the basement to the top story, where another rubber belt conveyor runs the entire length of the building. In a gallery under the floor is another belt for removing the grain. Each tower contains the necessary grain cleaning machinery and scales. Each tower can load four cars at a time. Fifty tons of grain can



VIEW OF THE HARBOR OF NOVOROSSISK ON THE BLACK SEA.

handling of grain of the Caucasus district of Southern Russia than in any other part of the Empire. On the north shore of the Black Sea, a short distance east of the strait which connects the Black with the Sea of Azov, is a large natural harbor, well protected by a projecting arm of the land. Private enterprise has done much to make this a perfect harbor and to provide facilities for handling grain that are equal to the best. Since the Vladikavkaz Railway Company opened the Tichoretzk-Novorossisk branch the growth of Novorossisk has been wonderful, and the growth of its grain trade has greatly surpassed the most sanguine expectations of the enthusiastic champions of this port. Previous to this little grain had been shipped from this port, but in August, 1888, the first steamer took out a load of grain. Since then the growth of the city and of its trade has been very rapid. It is frequently called the "Chicago of Russia." Its trade has not reached the climax of its greatness: on the contrary, it has wonderful possibilities still in store to surprise jealous competitors in the race for the place of the most important grain exporting port of the land.

During the six last months of 1888 36,221 tons of

rye and 1.49 of refuse. Barley containing over 3 per cent. of foreign matter as the barley exported did is not likely to command a very large premium in the markets of the world. The oats exported contained over 5 per cent. of foreign matter. Of this .14 was fodder grass seeds, .48 winter wheat, .03 rye, 2.25 barley and 2.23 refuse. The flaxseed contained 9.44 per cent. of foreign aliferous grass seeds, 9.84 of black flaxseed and 1.72 of refuse.

One great advantage of Novorossisk is that its harbor is open the year around. The large stone warehouses which are illustrated herewith were erected by the Vladikavkaz Railway Company shortly after the completion of the Novorossisk branch. These houses, which are used for storing grain on its arrival, are of two different types. They are arranged in rows, between which are a number of tracks. Alongside the warehouses are open-floored platforms ranging from 12 to 24½ feet in width. The largest of these warehouses is 364 feet in length, the smallest 238 feet. Part are 46 feet and the balance 70 feet wide. The interior of each house is divided into compartments by partitions placed as necessity requires. The floors are asphalted, the roofs are of iron and the walls of

be transferred every hour. The capacities of the houses range from 115,505 to 173,258 bushels. Power is supplied to each tower by four electric motors of 10-horse power each.

We give herewith a view of tower No. 7, showing a conveyor gallery connecting the warehouse on the left with the tower, and a conveyor gallery extending along the side of No. 7, through which grain is taken to the pier and run into the holds of vessels. In the masonry platform beside the small house are two openings for receiving the grain from the cars. Two cars can be unloaded at each tower at the same time. The main gallery for transferring grain to the piers was not completed when this photograph was taken, and the small temporary tower on top of it is for the purpose of transferring grain to the cars to be transported to the loading piers in the harbor. The company has three piers in the harbor.

We also give an interior view of the second story of tower No. 7. Hanging from the ceiling is the garner which receives the grain from the scale hopper. In the foreground is the temporary conveyor to transfer grain to the cars. On the right is the belt for conveying the grain to the different bins. At the right is a

speaking tube, an electric motor and switchboard. The levers in the foreground are for operating the receiving openings in the masonry platform.

A number of the grain stores are rented to grain exporters and the remaining stores have been placed at the disposal of the Commercial Agency of the Vladikavkaz Railway, which conducts a large business for grain cultivators, who consign their grain to the care of the railway company. The houses are rented for terms of one to three years.

The tracks beside the granaries are at an elevation of 32 feet 10 inches above the sea level, so that the grain-laden cars can be switched out onto the high pier in the harbor without climbing a grade. The company has 25 miles of side track with 221 switches to facilitate the transporting of grain from the stores to the piers. The three wooden piers shown on the right in our view of the harbor are about 300 feet apart. Each pier is 910 feet long and 57 to 70 feet wide, so that four steamers can be loaded alongside each pier at the same time.

Until recently all grain was taken to the piers in cars, both in bulk and in sacks. The two one-story piers have four tracks and the third pier, which has two stories, has four tracks above and two below. Switches and a transfer table facilitate the transferring of cars from one track to

ing to the fourth pier and upon the pier. The gallery from the large elevator to the coast is 2,506 feet long, and from that point to pier 4 is 251 feet, to pier No. 3 380 feet, to pier No. 2 940 feet. The total length of the galleries, including those on the piers, is 6,078 feet. It requires considerable power to operate the conveyors in these galleries, yet the cost of loading a vessel and the time required to load has been reduced and the work greatly facilitated.

The piers are connected with the storehouses and elevator by telephone, and are lighted by arc lights. The railway company has provided a barge to lighten vessels when necessary. This seldom occurs, as the harbor is wide and the water deep. It has also provided a tug and salvage boat with power pumps, capable of removing water from five holds simultaneously, and with a steam fire pump.

The large fireproof elevator which the company put to work on this year's crop is not only one of the largest, but is also one of the most expensive elevators in the world. It has a storage capacity of 3,000,000 poods (about 1,800,000 bushels), and cost 1,100,000 roubles (about \$550,000). The building, as is shown in our illustration, is a substantial brick structure. Work on its construction was commenced in April, 1892. The masonry was completed in October, 1893, the iron construction and roofing in January, 1894.

The second and third stories contain the cleaning machinery. The third story also contains the office and the boots of two short elevators. Along the fourth story run the main conveyors carrying the grain from the stores to the piers. The grain so carried can be discharged into the elevator if so desired, and two elevators are provided on this floor for receiving and elevating grain from the stores. The fifth and sixth floors are occupied by grain cleaning machinery, and the seventh, which is on a level with the floor above the bins, contains two conveyors running across the building, also drums for the rubber belting of 10 conveyors running over the rows of bins on either side, also the spouts which discharge the grain from the scales above. The eighth story contains the scales, and the ninth the heads of the elevators and the distributing spouts.

All grain received either from cars or from the stores, and that which is to be shipped is first elevated to the ninth floor, and after being weighed it is distributed as is desired, either to the bins, grain cleaners or to the main conveyors. Grain can be spouted direct into cars if desired.

The rubber belting used in the 9 elevators and in the conveyor galleries has a total length of 50,855 feet, or 14½ miles. It is 14, 18, 20 and 26 inches wide.

All the driving machinery of the elevator is run by



NEW FIREPROOF ELEVATOR AT NOVOROSSISK.



THE GRAIN STORES AT NOVOROSSISK.

another. The lower story is used for transferring sacked grain and other cargoes, the sacks being taken into the hold and emptied. The upper story is used in loading bulk grain brought from the warehouses in cars of special construction. The grain is transferred from the cars to the vessel by means of hoppers and spouts into which the grain is dumped by means of a trap in the bottom of each car. This method of loading vessels will not be used hereafter except in cases of emergency, as a complete system (6,078 feet) of conveyor galleries has recently been put in whereby grain can be transferred from any of the warehouses to pier No. 4 without the use of cars or sacks.

The galleries begin at elevator tower No. 7 and pass along the middle of the whole series of stores above a wide platform and lead to the middle of the large new storage elevator (a distance of 2,207 feet), where the main conveyors join, for transferring grain from the stores to the elevator for cleaning or storing. The main gallery is arranged to accommodate four conveyor belts, each of these can receive grain from each of the elevator towers. The capacity of each conveyor is 100 tons per hour. Each line of conveyors consists of eleven sections and are run by electricity. The galleries are 10 feet 10 inches wide inside, 7 feet 11 inches high.

From the large elevator the conveyor runs along the iron galleries under the railway track, and on leaving the latter turns toward the coast, crossing a covered marsh, where but a light wooden gallery could be and was constructed. Along the coast and up to the place where the railroad makes a turn toward the piers iron galleries have been built; also on and above the railway track lead-

and the machinery was in place in time to handle the new crop.

The elevator is 550 feet long and 81 feet above the railroad track, and the wings are 92 feet wide. The tower is 98 feet wide and 121 feet 4 inches high. The bins are over 66 feet deep, and 7 feet 1 inch in diameter.

The foundation of the elevator rests on rocky soil 27 to 28 feet below the railroad track. The superstructure is of brick and so are the hexagonal bins. These bins have very heavy stone foundations which taper down to the opening in the center that leads to the conveyor gallery beneath. Like the bins of the great Liverpool elevator, the bins of this house have iron fastenings running through the mason work. Each of the building's wings contains 180 bins. The capacity of the bins ranges from 450 to 970 tshetverts or nearly 5,600 bushels. The bins are arranged in seven rows, and below them are seven galleries. Five of these galleries are equipped with conveyors for removing the grain. Two end conveyors dispose of the grain from two outer spouts which receive grain from the cars. The elevator has facilities for receiving grain from 32 cars at the same time, and 4 elevators will remove the whole lot in 48 minutes.

Above the bins are belt conveyors to distribute the grain elevated to the different bins. The elevator scales and the cleaning machinery are in the middle portion of the building. The tower, which is eight stories and a basement, has 12 elevators with a combined capacity of 1,200 tons per hour. The conveyors can carry a like amount, and the grain cleaning machinery has a capacity of 600 tons per hour. In the basement is the driving machinery and the elevator boots.

28 electric motors. The eight motors which operate the long elevators have 20-horse power, and the balance have but 10-horse power.

The machinery of the nine elevators and the eleven sections of the four main conveyors are run by power transmitted from a central station by electricity. The entire grain handling plant is equipped with 62 motors of 10-horse power each, and 11 of 20-horse power each. At the central station are 3 generators of 250-horse power each. The central station also contains the machinery for lighting the plant and the company's station. Its 14 boilers are capable of developing 2,000-horse power. Oil is used for fuel.

The work of construction was under the supervision of Mr. Stanislas P. Kerbedz, engineer, who is president of the management of the Vladikavkaz Railway Company.

The Commercial Agency of the Vladikavkaz Railway was established by the railway company for the storage, sale and delivery of grain and other produce, and is under the management of a man thoroughly acquainted with the conditions of the local grain trade. The railway is liable for all business transacted by the agency, and employees are not allowed to engage in any commercial operations for themselves, and are strictly forbidden to buy or sell grain for the agency, all operations being under the control of the government and the railway company. Sales of grain are effected as stipulated by owners.

The Commercial Agency makes advances of money on goods consigned to Novorossisk to the extent of 60 per cent. of their value, less expenses of shipping, etc., the value being based on Novorossisk markets. The commission charged is 1 per cent. of selling price, ½ copeck per pood per month for storage and 2

copecks per tshetverts for weighing and checking on delivery to buyer. Other expenses, for wages of employes, for handling, drying, airing, turning, transporting, etc., are charged at their actual cost, being deducted from the amount of the sale of the grain. The first year of the agency's existence it handled 26,200 tons of grain.

The company has made many harbor improvements for the further accommodation of vessels, and has erected 10 grain elevators at different points on the Vladikavkaz Railway, which have a total capacity of 140,000 tshetverts. They are constructed on a plan that insures their answering all the requirements of the grain trade, and are arranged to store grain in bulk or in sacks in any quantities, together with the necessary cleaning machinery, etc.

The enterprise of the Vladikavkaz Railway Company in improving this port and providing every facility for the safe storage and the rapid handling of all grain without loss is to be commended to American grain carriers. That its efforts to build up the export grain trade of Novorossisk will meet with the great success merited seems certain; in fact, the continued rapid increase in the port's export trade is one of the rewards already obtained.

We are indebted to Alfred F. Bender, engineer of St. Petersburg, and to Mr. Stanislas P. Kerbedz, engineer, for the photographs from which our illustrations were made, and for translations from which we obtained our facts about the wonderful grain handling facilities of this new Black Sea port.

BUFFALO WANTS A TRANSFER ELEVATOR.

The Buffalo correspondent of the *Northwestern Miller* says: There is another move to secure car grain transfers here, and it looks as though it might go through this time. There has always been a demand for Buffalo weights on grain that has come through from the West, but the many attempts to secure the necessary apparatus have always failed. It is curious that the car grain trade has been sustained so long, under such haphazard practices. Some grain comes through with weights guaranteed, some with a guaranty to within 1 per cent. of billed weights, and some, shipped at way stations, is merely estimated. The dealer, in the last two instances, is dependent on the honesty of the buyer who weighs the grain out, and, in the first case, on the shipper. It is proposed to build a two-car transfer on the Lake Shore Railway, which, by accommodating Nickel Plate cars, will intercept nearly all the grain coming into the city. If the roads will not consent to set it up, a company of grain dealers will be formed. There have always been doubts about making such an enterprise self-sustaining, but the need grows greater every year, and with it the prospect of support.

A vast amount of talk has been made about the saving to the farmers by the reduction of elevator storage rates at this point. A grain man figures out that the farmers will never know by consulting their pocketbooks that any such reduction had ever been made. Not one farmer in 1,000 ever ships any grain to Superior or Duluth, and if he did he would not be apt to store it, which would be the only way he could realize any benefit from the storage rates.—*Telegram, Superior, Wis.*

EXPERIENCE WITH AMERICAN ELEVATORS IN RUSSIA.

BY ALFRED F. BENDER, ENG., ST. PETERSBURG.

An interesting pamphlet, published recently by Mr. T. W. Reabeenin (or Rjabinin, if you prefer), under the title of "Elevators, and Our Allurement Thereby," throws some light upon the elevator question in Russia. It sums up the accounts of seven elevators erected on the American system in various districts

to ten times cheaper than in America, Russia's competition with expensive mechanical plants is always likely to prove a success. That is the reason why so many good industrial establishments that have ventured to start business on the same modern principles and footing as they would have maintained in any other civilized country of the world are kept in comparative or absolute idleness. We never hear of American farmers overcrowding the labor market, nor of their wives being reduced to the necessity of accepting daily hire at a rate of from 7½ to 10 cents per day of 12, 14 and even 16 hours, as the Russians and their wives do, readily accepting engagements in advance during the dull and long winter months.

Again, Russia never did possess so extensive and developed a network of railroads as that of the United States, with its distinct and reliable grain routes of enormous carrying capacity, by which the bulk of grain flows from the West to Buffalo and farther on to New York or to New Orleans, not merely insuring to those commercial centers a certain amount of annual business, but also fully justifying the investment of large amounts of money in elevators and all those shipping facilities which are provided for in order to dispense with capricious and unreliable manual power.

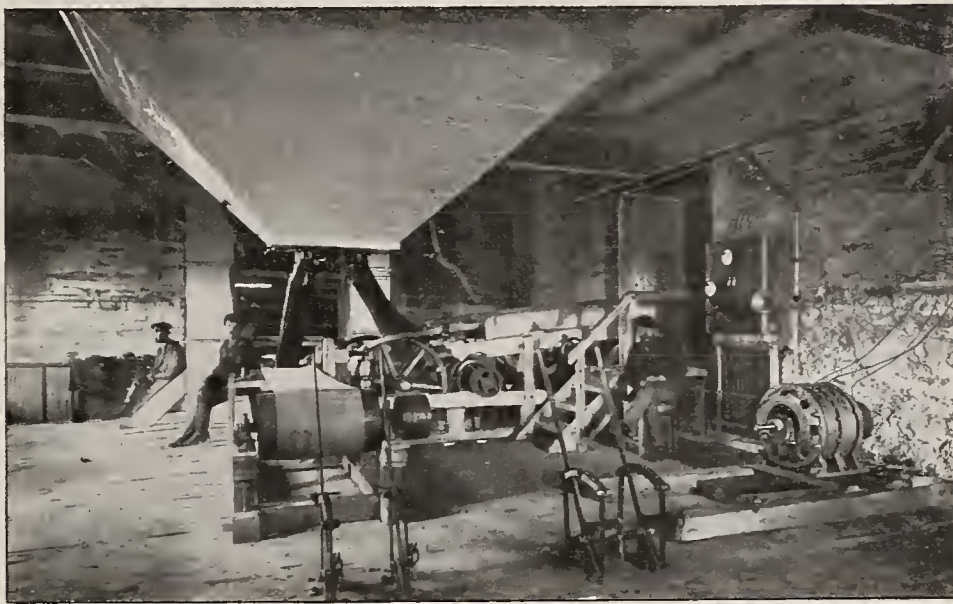
Free competition between private railroad corporations, necessarily reducing freight rates of existing lines, or building new lines, has rendered many a service to owners of American elevators, and through them indirectly to the grain trade and farmers. Sales by sample, as well as grading and classification of grain, and grain inspection itself became a necessity, and were but natural and logical consequences of what had previously been called into existence by the conditions of public life.

In Russia railroads are developing but slowly, and the number of private railroad societies is rapidly decreasing. This is owing to the policy of the Russian government, which tends to acquire the whole railroad business, mainly on account of the indebtedness of the majority of railroad concerns. Consequently the grain shipments of any point may be stopped at any time if the government deems it necessary, in spite of the private interest of the elevator men and grain dealers, who are not free to organize or to build railroads and elevators as they would like.

There are at present no favorable conditions under which the elevator business could be made as profitable here as elsewhere. There can be no successful competition between state and private railroads, and consequently no permanent grain routes protecting the elevators and grain trade, as in the United States. The United States government does not own railroads and elevators as Russia does, and there nobody would ever dream of im-

posing such a system to control both the grain trade and public life.

The average Russian farmer, the peasant, being very poor and seldom prosperous in crop growing, has no desire to have his grain graded for sale or stored in the modern way at an elevator and at a high storage fee. He fears a shortage and a shrinkage the elevator man might be unable to account for or unwilling to pay for. On the other hand the elevator man cannot reasonably be expected to make a profit and get a legitimate interest on the money invested by keeping his elevator bins full of ungraded grain for a long time and possibly free of charge. His own interests urge him to receive and ship as much grain as possible and move it as quickly as



A VIEW OF SECOND STORY OF TOWER NO. 7.

of this country a few years ago as having proved failures.

According to the author's opinion, the customs and conditions of our national grain trade do not in the least justify the adoption of a foreign system that had developed and grown up out of quite different circumstances and under peculiar conditions which have nothing whatever in common with those prevailing in Russia. The Russian public, it would seem, was misguided by those writers, mostly engineers, who eagerly and profusely advocated the adoption of the Ameri-



TOWER NO. 7 AND CONVEYOR GALLERIES.

can elevator system and modern commercial methods to regulate the national grain trade.

The fact seems to have been overlooked that, whereas in the United States the system arose and grew up gradually under the influence of natural conditions of life and local trade, there were in Russia no similar conditions; consequently the introduction of the American system must be considered to have been made artificially, and as a result of short-sighted policy.

In Russia there are no such things as "standard of life" and scarcity of labor which raise the rates of wages and compel the producer to prefer mechanical power. Labor being cheap, four or five times cheaper than in any other European country, and from eight

possible, with a view to the possible avoidance of idle room.

The government demands that the elevator man submit to certain rules and regulations especially enacted for the elevators and prohibiting the reduction of enforced fees or rates of charges. These must necessarily be kept on the same level with wages. Otherwise the elevator runs the risk of remaining empty, being unable to stand competition with labor. We here arrive at that enchanted circle where there is no issue available: for, as already said, the wages being generally low the elevator rates often do drop lower than elsewhere, not only on account of hard times and bad crops or financial depression, but in the ordinary winter season, which has a duration of seven or eight months in several sections of the country.

Moreover, there is a notable deficiency of distribution facilities whether by rail or waterway, which interferes with the development of the bulk grain transporting system and makes bags and bagging indispensable. There are but few railroad lines which ship grain in bulk or which have cars suitable for the purpose. On some railroads, however, there are special appliances in the way of cases or tanks made of sail cloth (on the system of Mr. Okouneff, engineer) used for adapting common freight cars for the transportation of bulk grain. These cases are about the dimensions of the inside of a common car, 3½ to 4 feet deep. The cases are stiffened and when unfolded cover the floor and half the height of the inner walls of the car and are filled through the open door of the car.

The amount of bulk grain shipped is a mere trifle in comparison with that shipped by the usual method of shipping grain in bags. That is a point not to be overlooked when asking a shipper why he does not prefer the elevator to the old-fashioned warehouse where grain is stored in bags just as it arrives, and where (to the owner's satisfaction) it does not lose its identity. He feels certain that the elevator man cannot take particular interest in dealing with a great many small quantities of bagged grain that must be kept separate and ungraded, and which must be re-bagged for the next shipment. The shipper himself would not stand the wear and tear of his bags nor bear the expense of rebagging aside from the loss of time in the almost useless operation of grading, as there is no one that wants his grain graded.

The shipper knows by experience that if he gets into restricted circumstances or pecuniary difficulties while waiting for a purchaser for his grain it is not the elevator that will help him out, but the old-fashioned warehouse with its double certificates (warehouse or loan certificate) on which money may be advanced by either the bank or the warehouse. These certificates have nothing in common with American elevator receipts, and are so connected with various formalities as to prevent speculation. Thus the shipper gets money for ungraded with less difficulty than for graded grain. Why, then, should he apply to the elevator man, who does not accept small shipments on account of his objection to doing a troublesome and unprofitable business? Under such circumstances, when neither side will or can take any advantage of

their mutual situation, what is the use of having an elevator?

Thus it develops that the greater number of Russian elevators of American type are reduced to doing little or no business. The interesting and instructive material gathered by Mr. Reabeenin, consisting chiefly of annual accounts and statistical returns issued by the management of respective elevators, goes to show that out of the whole number of existing Russian elevators there are but eight running. Seven of these have already had ample experience and have been found to give certain determined and almost equal results. Five have adopted obligatory grading and consequently are working at a loss. The remaining three run without grading, but without profit also.

Among our first elevators was that erected at the southern dam of the sea canal at the new port in St. Petersburg. It belongs to Boreyska & Maximowitch, engineers, who started up in August, 1890. The building is located close to the railroad station of the branch line connecting with the St. Petersburg-Moscow Railroad (now owned by the state). It is fire-proof, built of wood, iron faced. Its capacity was originally 110,000 tshetverts (about 500,000 bushels), its cost being about 550,000 rubles (\$225,000); but the capacity was increased to 130,000 tshetverts by increasing the height of several bins, the total cost of the building then reaching 850,000 rubles (\$425,000). Recently a further enlargement brought the capacity of the elevator to 170,000 tshetverts, the total cost then amounting to nearly 1,000,000 rubles, or about \$500,000.

The elevator has 234 bins of a storage capacity of 4,800 to 6,000 poods (3,536 to 4,550 bushels) each. Besides this there are separate iron buildings for storing grain in sacks or bags having an aggregate storage capacity of 540,000 poods, or about 401,730 bushels. The elevator proper unloaded cars arriving by the branch railroad and vessels and barges running in up to the berths on the opposite side. On the railroad side there are six receiving sinks along the track which allows of unloading six cars of grain, whether bagged or in bulk. On the canal side there is a receiving tower fitted with a traveling noria.

In unloading vessels the grain lifted to the top of the tower by either the permanent or traveling noria is distributed to the bins by six cross and two longitudinally running rubber belt conveyors aided by discharging barrows which are located on top of the bins into which the grain is to be dumped. At the bottom of the elevator are six longitudinal rubber belts which convey the grain from the lower or discharging spouts of the bins to the permanent norias, which carry it upward once more to the top of the respective bins in case that a cooling or airing of the grain is required. Or the grain can be spouted into six cars by means of six different discharging tubes.

For loading export grain into steamboats there are three discharging towers on the canal side. Two of these have traveling and the other a permanent conveyor. Grain is weighed in receiving or shipping on 16 automatic scales. The grain cleaning machinery consists of 6 fanning mills, with suction, and 10

triers. The total amount of grain that can be fed in or discharged by the elevator (by means of the top and bottom conveyors, six norias, three discharging towers and one receiving tower) is about 10 tons per hour. For transferring grain from vessels and barges into ocean steamers a separate rubber belt conveyor is located outside the elevator, across the canal and between the receiving and the next discharging tower.

The entire machinery, as well as the lifting elevator running to the top of the elevator for carrying passengers and the main pulley of 500 kilos' carrying capacity, are driven by a powerful steam engine. To complete the accommodations the elevator is provided with a dynamo for electric lighting, and with a scale balance for weighing empty and loaded cars. The annexes include office rooms, etc.

Although intended for storing graded and ungraded grain this elevator does not answer the requirements of the conditions and customs of the local grain trade. Grain is generally received in bags, and the owners want it kept for a long time, for no less than six weeks sometimes, and at as low a storage fee as possible. In consequence of this deficiency the Ribinsk-Bologoye Railroad Society, which is interested in grain traffic, was compelled to address the Department of Agriculture and Rural Industry asking permission to have an elevator built on the same canal in St. Petersburg that would fill the requirements of their customers, as the elevator already established would not store grain at suitable rates. In the opinion of the said railroad company the established elevator "was built with no consideration whatever of the requirements of the St. Petersburg grain trade, and notwithstanding its high cost does not meet those requirements."

The cost of the elevator does not allow of cheap and long storage of grain, the property being profitable only as long as the whole business is operated rapidly, up to 12 business cycles during the season of navigation. As the demand for immediate grain shipments at St. Petersburg ceased a few years ago grain must necessarily remain in store waiting for a purchaser; and this together with the petition to the Department of Agriculture, compelled the elevator owners to have separate storage houses built for grain for which long storage was required, meantime to appropriate half of the elevator room for the same purpose. There were also separate sheds to be erected for keeping grain in bags, similar to the accommodations which may now be seen at any railway station.

It will thus be seen how little the elevator at St. Petersburg fills the requirements of the grain trade of that port in its capacity of quick handling and short storage of grain, as well as the substitution of mechanical power for labor.

The accompanying tables show the amount of business done by this elevator from 1890 to 1892. They show that the operations were far from being to the full capacity. The decrease in 1892 was due to the prohibition of export. Returns for 1893 were unobtainable. One pood equals 40 pounds, or 36 pounds avoirdupois.

The whole amount of grain run through the elevator during 1890 was 1,404,488 poods, against 2,167,331 poods in 1891, and 405,906 poods 39 pounds in 1892.

[TO BE CONTINUED.]

AMOUNT OF BUSINESS DONE BY ST. PETERSBURG ELEVATOR, 1890-1892.

	1890.		1891.		1892.	
	Received. Poods.	Shipped. Lbs.	Received. Poods.	Shipped. Lbs.	Received. Poods.	Shipped. Lbs.
Corn.....	132,890	14	21,676	02	21,667	..
Wheat.....	80,740	05	634,183	28	578,880	..
Rye.....	1,095,536	21	340,288	20	338,258	..
Oats.....	145,326	30	966,555	39	779,609	15
Flaxseed.....	611	06	86,068	..	185,318	..
Barley.....	..	..	588	..	9,184	..
Total.....	1,455,404	36	1,205,456	09	1,905,304	30

GRAIN TRANSFERRED BY ST. PETERSBURG ELEVATOR DIRECT FROM CARS AND VESSELS TO OCEAN STEAMSHIPS.

	Transferred.			Stock in Bins.					
	1890. Poods.	1891. Poods.	1892. Poods.	On Jan. 1, '91. Lbs.	On Jan. 1, '92. Poods.	On Jan. 1, '93. Lbs.	On Jan. 1, '91. Poods.	On Jan. 1, '92. Lbs.	On Jan. 1, '93. Poods.
Wheat.....	45,880	48,240	..	18,388	18	83,391	12	80,339	16
Rye.....	..	..	14,055	..	..	1,800	36	..	..
Oats.....	153,155	145,021	203,795	25	126,688	..	35,783	32	94,358
Flaxseed.....	..	68,786	..	101,005	..	..	..	..	..
Barley.....	..	..	..	..	..	..	..	..	15,679
Total.....	199,085	262,027	217,850	25	246,031	18	120,976	..	190,377

The department of agriculture at Washington is making a great deal of statistical history for the rising generation of grain dealers—providing there should be any such business in existence after the present generation gets through basing their operations on the department estimates.—*Chicago Trade Bulletin.*

A bull grain receiver has been figuring on the number of live stock in the country with a view to discovering how soon this load of winter wheat, which is resting like an incubus on the local market, could be fed. As a sort of basis for estimates 7½ pounds a day or 45 bushels a year, the amount being fed to Armour's horses, is taken. He figures that an average consumption of 3 bushels by every one of the horses, cattle, sheep and hogs in the country would take care of the entire crop of wheat. He figures that in the states of Illinois, Iowa, Kansas, Nebraska, Missouri, Michigan, Indiana, Ohio and South Dakota there are 22,600,000 hogs, and that if each animal gets 5 bushels of wheat a surplus of 113,000,000 bushels will be taken care of.

STANDARD GRADES FOR MANITOBA'S NEW CROP.

The standards, as selected by the board [The Western Grain Standard's Board] this year, are practically the same as last year. There was little trouble in fixing the standards, as the crop is similar to last year's in its general condition, and it was agreed at the outset by the board to make the standards as nearly the same as last year as possible. The highest grade of Extra Manitoba Hard is a magnificent sample of pure, hard Red Fyfe Wheat, weighing 62 pounds to the bushel or more. No. 1 Hard is a fine milling wheat, weighing 61 pounds to the measured bushel. The act calls for a wheat weighing 60 pounds to the bushel for this grade, but the wheat is all so heavy that it has been difficult this year to get a standard sample down to 60 pounds, consequently the standard shows a weight of 61 pounds for No. 1 Hard, the same as last year. No. 2 Hard is a really good hard Red Fyfe milling wheat, but this grade weighs a couple of pounds lighter per bushel than No. 1. The grade of No. 3 Hard is still a couple of pounds per bushel lighter than No. 2, and will take in some wheat that was caught by hot weather at a critical stage, and, as a consequence, presents a somewhat bleached and shrunk appearance. It is nevertheless a fairly good milling wheat. The grades of No. 1 and No. 2 Northern are the same in general condition as the grades of No. 1 and No. 2 Hard, with the exception that the Northern grades will contain a smaller percentage of hard Red Fyfe Wheat. The inspection act stipulates that the Northern grades shall contain not less than 50 per cent. of hard Red Fyfe Wheat. Soft wheat will be classed as "spring" grades, but there will be very little of this class of grain. Only two or three bags of soft wheat appeared among the samples gathered for the board of examiners. Smutty wheat, of course, will not be allowed in the regular grades.

It is a matter for satisfaction to the trade that the quality of the wheat is so high this year. With such fine wheat to work with, it will be pleasure for millers and shippers to do business this year. The person who would grumble with such wheat could be set down at once as a born faultfinder. The fact that the grades will be practically the same as last year is also a matter for satisfaction on the part of shippers. Foreigners who handled Manitoba wheat last year will find the grades this year fully up to expectations, and there will be no misunderstandings and disputes, such as might occur from a lowering of the quality of the grades. In fact, Manitoba hard wheat may be expected to increase in favor during the next year in British and other markets where it is handled. It is certainly a very desirable milling wheat.—*Winnipeg Commercial*.

CHEAP WHEAT AND ITS LESSONS.

It is an interesting and instructive lesson to follow grain quotations. For some years wheat has been gradually but steadily declining in price, though it is only within the past two years that it has fallen below the quoted price of corn. For many years wheat has been regarded as a food exclusively adapted to the use of man, and that for only a specially favored portion of the human race. When wheat was raised within but a limited area, the demand for wheat flour for the use of the more affluent sustained the price of the grain, and the fictitious value thus maintained so effectually prevented its use as a food for animals that it had come to be regarded as unfitted for that purpose. In America alone has increasing demand kept pace with increasing supply, the inevitable result being the prevailing low price.

This state of affairs is not without its compensations. It has taught the farmer who had fallen into the wheat rut that his soil will produce other and more lucrative crops, and he is everywhere experimenting with the purpose to find something that will pay better than wheat.

It has demonstrated that wheat is as valuable for feeding stock, when used judiciously, as corn and other grain hitherto regarded as especially adapted

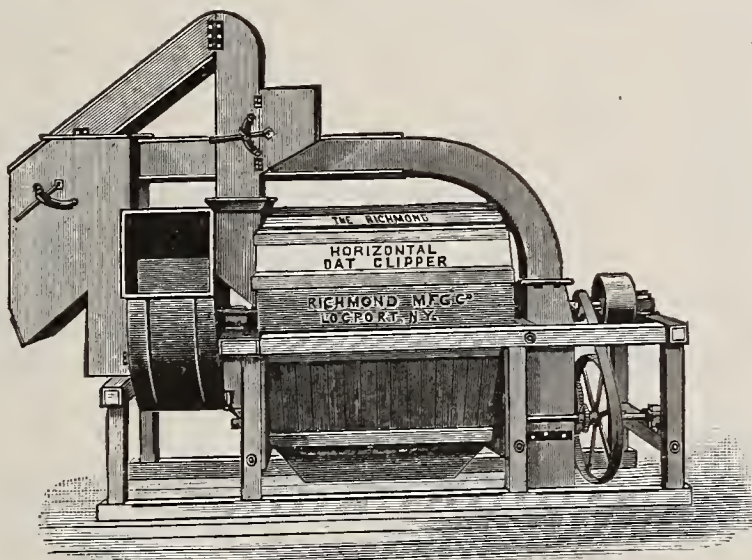
for animal food. This is perhaps the most important result. If wheat, in the shape of beef and pork, will bring a better price than as a grain or flour, those portions of the United States especially suitable for wheat raising will combine stock raising therewith, thus enhancing the value of their farms while increasing their profits.

The only way to benefit the price of wheat is to abandon the production in such quantities, and the Northwestern farmer has begun to learn that fact, and profit thereby. If he has learned that his farm is fit for something besides a wheatfield, the lesson is worth all it has cost.

THE RICHMOND HORIZONTAL OAT CLIPPER.

An oat clipper for which is claimed a high order of efficiency, durability and economy—the most that can be said for any machine—is herewith illustrated. The manufacturers show their faith in the claims by asking a fair trial of the powers of the machine, which they believe will prove satisfactory to the requirements of any user.

The Richmond Horizontal Adjustable Oat Clipper is operated as follows: The oats fall into a hopper and go from there in an even and regular stream into the first separating spout, where they are met by a strong current of air which removes dust, chaff, light stuff, etc. The fan blows the dust out and the light and broken grain falls into the first separating spout and passes out through a valve. The current of air



THE RICHMOND HORIZONTAL OAT CLIPPER.

in the first suction spout is regulated and controlled by a valve.

From the first separating spout the oats pass into a revolving case made of alternate staves of perforated sheet steel and corrugated chilled iron. Here a series of revolving clippers especially designed for the work clip the oats thoroughly without breaking the oat or injuring the hull. When these clippers are working a strong current of air is drawn into the inside of the case and expelled through the perforated sheet steel staves into the fan, carrying all clippings, etc., as they are detached from the grain. From the revolving case the oats fall into the second separating spout, where they are operated upon by a current of air regulated in the same manner as in the first spout.

One desirable feature of this machine is that the clippers can be adjusted to any desired distance from the case without opening the machine; thus the operation of the clipping mechanism is under the complete control of the operator. With these adjustable clippers working in connection with the revolving case a uniform action on the oats is obtained and also a high efficiency in work. These oat clippers are made in seven sizes and styles by the Richmond Manufacturing Company of Lockport, N. Y., from whom any further information desired may be obtained.

The Fort Worth, Texas, Chamber of Commerce has organized a grain inspection department with E. L. Malory as chief inspector. The committee on grain will establish rules governing grading and regulate inspection fees.

RIGHTS OF PARTIES FURNISHING SEED THROUGH AGENTS.

The practice has become quite common for dealers in certain kinds of grain or seeds to furnish seed thereof to farmers. Of course, in many cases, the object sought is the control of the crops in the fall. Whether that is the purpose sought to be attained, or it is done through charity, as where a section of the country has been especially impoverished, it is important to know the law governing such cases.

The Supreme Court of Iowa lays down the controlling principles in the recently decided case of Gilman Linseed Oil Company vs. Norton (56 Northwestern Reporter 663). Here it seems that a certain company furnished to a firm doing business at another point 1,000 bushels of flaxseed for the purpose of having it loaned to farmers for use as seed for the purpose of procuring the product of the seeding. This firm were, as agents of the company, to loan the seed for the purpose stated only, for and in the name of the company, on terms specified in the agreement, taking notes to secure payments for the seed, and making contracts for the product thereof at the rate of 25 cents less than the Chicago prices for each bushel delivered to such agents at their place of business.

They were to ship to the company furnishing the seed all of the products of the loaned seed which they should receive under the contracts with the farmers, and were not to loan, sell, or buy any flaxseed during the continuance of the agreement for anyone excepting this company without its written consent.

The agreement also contained an express stipulation that all seed purchased under it from the time of such purchase should be the absolute property of the company referred to, and that the firm acting as its agents should have no right or interest in, or lien on, the same, save only for money they actually advanced, and that so long as it remained in their actual possession they should hold it only as the agents of said company. The following fall they shipped two carloads of flaxseed to certain brokers and commission merchants in Chicago, who sold same and paid the shippers' draft.

The company which furnished the seed for sowing endeavored to obtain redress from their agents, but having failed in that brought suit against the commission merchants to recover the value of the flaxseed shipped to them, which, it was alleged, they wrongfully converted to their own use.

The court holds that the company was justified in doing this. It also holds that the title to

all seed purchased under the agreement vested in the company at once and was not affected by the further obligation placed upon their agents requiring them to make good any loss which should result from their shipping inferior, dirty or unmerchantable seed, the right to reject any seed not being reserved. The flaxseed when shipped to the commission merchants belonged to the company mentioned, and its agents had no authority to divest it of its title by selling the seed to others. Even if the company was not in a position to receive flaxseed at the time, and its agents were compelled to ship same away, still they would have no right to ship it in their own name and sell it as their own. The mere possession of personal property by whatever means acquired, if there be no other evidence of property or authority to sell, will not enable the possessor to give good title.

For the reasons stated judgment rendered by the trial court, in favor of the company which originally furnished seed for sowing, and against the Chicago commission merchants, for the value of the flaxseed sold to the latter, by the agents of the former, with interest and costs, is affirmed by the Supreme Court.

The exports of grain from the port of San Francisco during the present cereal year to October 1 were 1,276,629 centals of wheat, 209,219 barrels of flour, and 319,632 centals of barley, a total of 100,733 short tons. During the previous season to the same date the exportations amounted to 3,409,139 centals wheat, 208,801 barrels flour and 1,508,777 centals of barley, a total of 266,774 short tons.

GRAIN STORAGE WAREHOUSE.

Daniel R. Bowker of Brooklyn has invented a new grain storage warehouse, of which the following is a specification, forming part of letters patent No. 508,561, dated Nov. 14, 1893.

The advantages claimed for this peculiar construction of a warehouse are that the outer wall affords protection against fire in surrounding buildings, and even if the outer wall should be entirely destroyed the bins would stand, and the contents would be uninjured. The outer wall prevents moisture getting to the inner wall. The presence of the air chamber in the inner wall prevents sweating of that wall, it being well known that a large or heavy body of masonry not ventilated will sweat by itself, and the galleries between the walls enable the watchman to frequently circulate around the building and observe the condition of things at the height of every gallery. The windows or other ventilating arrangement in the exterior walls allow free circulation of air currents to dry the inner wall, and also the gallery spaces so that mold, mildew, dampness, etc., are avoided. Also, should a fire arise, these galleries permit the firemen to attain any desired height with their fire appliances to suppress fires in adjoining buildings, on any side of the warehouse. The inner wall primarily supports the building, and the air chamber in it prevents its sweating. The outer wall additionally strengthens the building and prevents fire from destroying the structure; all the destructive effects of fire in adjoining buildings being received upon the outer wall, which, even if entirely destroyed, would not destroy the building.

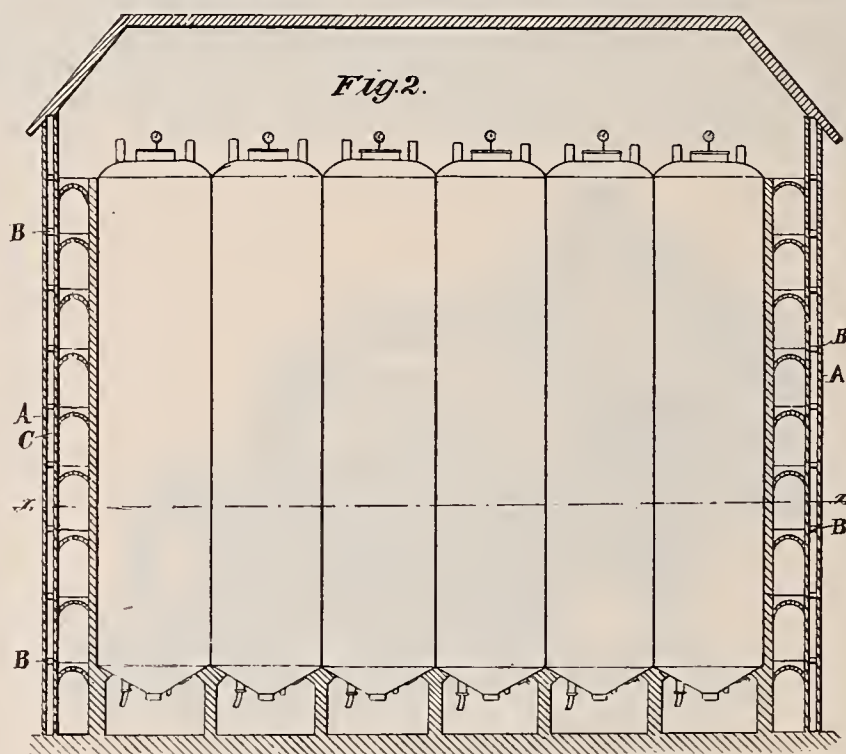
In the drawings hereof, *Fig. 1* is a plan view in section on the line *x, x*, of *Fig. 2*. *Fig. 2* is an elevation in vertical section on the line *x, x*, of *Fig. 1*. *Fig. 3* is a view partly in section and partly in elevation of one of the grain bins. *Fig. 4* is a view partly in section and partly in plan of the upper part of one of the grain bins. *Fig. 6* is a vertical sectional view of the lower part of the sampling tube.

Referring first to *Figs. 1* and *2*, *A, A* represents the exterior wall of the building. It is made double as shown, that is to say, having an air space *C, C* between the two thicknesses of the wall, the two walls being tied together here and there as required architecturally by stays *B, B* (see *Fig. 2*). *D, D* are two solid walls running across about midway of the length of the building, and they divide it into two parts so that the spread of fire, should any occur, from one portion of the building to the other portion, will be practically impossible, there being iron doors or other suitable fire excluding devices placed at all doorways. *E* is a space or room which extends from the bottom of the building to the top. On the basement floor of the building are located the engines and other appliances for carrying on the work of the building. In space *E* are also arranged stairways *F*, which extend from floor to floor throughout the height of the building, there being no other stairways in the building. Within the external walls *A*, and separated from them by a hallway *G*, which extends all around the building at each floor, are placed the grain holders proper *H*. The entire space within these walls *H* is divided into a number of grain bins preferably square in shape, made of boiler plate or brick. The boiler plates *I, I* are riveted together as shown, and here and there are arranged vertical timber strips *J*, which are of differing thicknesses so that their inner faces are all upon the same line. They are fastened by bolts or screws or otherwise to the boiler plates, and along their inner faces are arranged boarding or planking *K*, preferably of matched stuff. At the corners of each bin are arranged rectangular pieces of timber *L*, having clamp pieces *M* on their inner sides between which and the pieces *L* the ends of the planking or boarding *K* are clamped and securely held as shown in *Fig. 4*. The metal boiler plates are riveted together at the corners, and the space between the boarding *K* and boiler plates is filled with cement or plaster. This prevents the cold from the iron acting to condense such moist-

ure as may be in the grain which would engender molding, musting or growth in it. Both sides of the boiler plates are protected in this manner, although one side only is shown.

Referring to *Fig. 3*, *P, P* represent two exhaust pumps. One may suffice for each bin. These pumps exhaust the air from the air-tight bins. *Q* is a vacuum gauge, one of them being applied on each bin. They not only show the degree of vacuum attained by the pumps, but also indicate a leakage; *p', p'* are two grain bin thermometers to register the temperature of the grain at various parts of each bin.

Referring to *Fig. 3*, *V* is an air inlet pipe covered with a perforated metallic plate *W*, so that the grain cannot escape, but a blast of air may pass up through it into the grain. *Y* is a pipe leading to any suitable blast device whereby hot air, as may be desired, is forced through the grain; *b* is another opening covered by a cap *c* which has a packing ring *d* through which a natural passage of air will be allowed of large area whereby the temperature of the grain may be maintained in a normal condition. This opening being large in area is covered with a conical, perforated cap so that the air may pass in and out but the grain cannot; *f* (see *Fig. 6*) is an opening in the bin through which the grain is withdrawn when desired. It is



covered by a sliding gate *g* which is pulled open and shoved shut by a rack *h*, which is guided by guides upon each side and is actuated by a pinion and crank handle.

In order that the grain may be sampled at any desired point in the height of each bin, a tube *m* (see *Figs. 3* and *6*) extends from the bottom to near the top of each bin.

HAY IMPORTS EXCEED EXPORTS.

Hay aggregating 8,039 tons, valued at \$63,060, was imported during August, according to the last report of the Bureau of Statistics, against 2,177 tons, valued at \$21,730, imported during August preceding; and during the eight months ending with August 76,088 tons, valued at \$643,146, were imported, against 74,048 tons, valued at \$687,606, imported during the corresponding months of the year preceding.

Of imported hay we exported none in August, against 9 tons in August preceding; and during the eight months ending with August 64 tons were exported, against 111 tons, valued at \$1,030, exported during the corresponding months of the year preceding.

We exported 3,198 tons of domestic hay, valued at \$49,873, during August, against 5,021 tons, valued at \$89,008, in August preceding; and during the eight months ending with August 37,088 tons, valued at \$602,781, were exported, against 26,896 tons, valued at \$432,842, exported during the eight months ending with August preceding.

THE SYSTEM OF GRAIN INSPECTION; ITS ESTABLISHMENT AND GROWTH.

NO. VIII.

The inspection of grain by regularly appointed inspectors was unknown at Philadelphia in 1867. The grain was stored by the classification of the elevator superintendent in most cases, although it was not unusual for the work to be done by private inspectors in the employ of individual grain firms. Previous to this time and until the establishment of the inspection department by the Commercial Exchange of Philadelphia in 1876 all grain which arrived was sold by sample and the purchaser ordered it to the elevator to be placed with other grain of like kind or quality of his ownership.

As the trade grew larger and the number of operators more numerous, this system of operation was found to work very unsatisfactorily to all concerned. Until the private inspection could be made, cars were held on track, causing much delay in unloading, and giving great annoyance to the railroad companies. Blockades of cars at the railroad terminals were of frequent occurrence. As each grain firm also kept the grain owned by it separate from that of others, the storage capacity of the elevators was greatly lessened, which further contributed to the inconvenience of the railroad companies in the prompt handling of their cars. There were up to this time only two export elevators in Philadelphia: one of about 450,000 bushels' capacity, leased by the Philadelphia Grain Warehousing and Drying Company from the Pennsylvania Railroad Company, and the other of about 700,000 bushels' capacity owned and operated by the International Navigation Company. The elevators were each located at the terminals of the Pennsylvania Railroad Company.

In order to avoid the evils resulting from the then existing mode of inspection measures were taken by the grain trade to establish a system of inspection which should be under the supervision and control of the grain committee of the Commercial Exchange of Philadelphia. The subject was brought before the board of directors on Feb. 11, 1876, and the grain committee adopted the necessary rules and regulations and appointed inspectors to inspect and grade all grain arriving at the export elevators. The inspection went into effect April 15, 1876. At the present time all grain arriving at Philadelphia (except grain in transit on through bills of lading) is inspected on its arrival.

The department is conducted under the fee system. The chief receives all the fees and pays all the expenses of his department. The Exchange is not interested in any way in the financial management of the department, which has been operated in the same manner since its organization. The rules provide that all grain on track or afloat received at recognized railroad terminals or convenient locations for such purpose shall be inspected, and the inspector shall have free access to all grain to be inspected and be satisfied that it is properly stored according to grade. All grain delivered to vessels or cars from regular elevators shall be officially reinspected out at time of loading unless otherwise ordered, and the chief inspector is required to report to the committee on grain in writing all attempts to defraud the established system of inspecting and storing grain, or to deliver grain of a lower grade than that called for by the warehouse receipt. All appeals growing out of the inspection must be referred to the committee on grain for final adjudication. A method of inspection is pursued by the use of the grain trier, etc., similar to that followed at Chicago and other large grain inspection points.

When in doubt as to the proper grade of a car of grain, and not wishing to do an injustice to the shipper, the deputy inspectors carefully sample the contents of the car and hold the car on track for the opinion of their chief before giving the grade. In this manner they endeavor to do full justice to the grain.

It happens frequently that cars of grain for want of proper cleaning at the point of shipment would receive an inspection of a lower grade, if it were not for the wise instructions given to the chief inspector by the grain committee to order blown all grain that in his judgment would be entitled to the higher grade if properly cleaned. The deputy inspectors at the export elevators have charge of all the deliveries of grain and under their supervision all the grain for export is inspected out.

The deputy sends to the chief inspector's office, daily, samples of all cars that miss the contract grades, and these samples are delivered to the receiver, thus enabling the receiver to bear witness that his shipper has been fairly dealt with. The chief inspector devotes at least one-half of each day among his deputies reviewing their work on the inspection tracks, thus insuring uniformity of inspection at all the inspection points. He personally examines all cars that may miss grading, either in the cars or by reviewing the samples drawn by his deputy. If in his judgment it is necessary to change the grade on a car it is at once ordered done without recourse to the grain committee, which is only called upon to act when an appeal is made to them from the decision of the chief inspector.

In addition to the information furnished to the elevator companies a memorandum is furnished to each receiver from the chief inspector's office, giving a transcript of the inspector's hooks of the car number, initial, grade, and all remarks pertaining to each car inspected for him, also stating place where inspected. This is furnished the receiver before the opening of 'Change and before he receives his warehouse receipts from the elevator companies.

The chief inspector is Capt. John O. Foering, who has held the position since April 1, 1877, nearly eighteen years continuously, having been unanimously re-elected each year. The work of the inspection department under his supervision has been most satisfactory, as in fourteen and one-half years, from April 1, 1877, to 1891, there were inspected on receipt in Philadelphia 514,842 cars on which there were only 25 appeals representing about 150 cars. The chief was sustained in his decisions on all but four appeals representing 11 cars. On outward inspections there were six appeals on cargoes representing less than 100,000 bushels out of a total outward inspection of export grain of 196,114,600 bushels, in all of which decisions the chief was sustained by the committee.

The report of the grain committee of the Commercial Exchange of Philadelphia for the year 1893 contains the following: "It is again an appropriate time to report the zeal of the chief inspector of grain and his able corps of deputies in constantly maintaining the good name, both with foreign buyers and Western shippers, of the favorably known Philadelphia grain inspector. The inspector's conscientious eagerness to obtain the best results has contributed in no small degree to the high standing of our port as a grain shipping and receiving center, and has established a sound base upon which our merchants may build large prosperity. We may congratulate ourselves upon the thoroughness of our system, and rest assured that it continues constant and uniformly fair to all concerned." The following table represents the amount of grain inspected at Philadelphia from April 1, 1877, to Nov. 8, 1893:

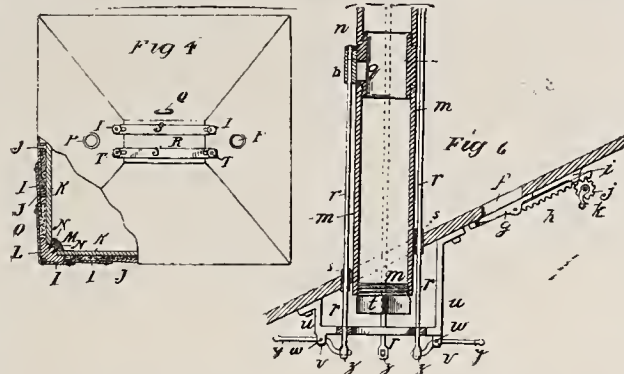
Years.	Number of cars inspected.	Number of bushels of grain inspected in from vessels.	Number of bushels of grain inspected out for export.
1877 9 months.....	25,021	251,523	8,788,081
1878.....	70,006	653,708	27,915,589
1879.....	73,885	616,192	31,527,946
1880.....	70,222	597,015	30,282,205
1881.....	38,935	753,476	15,399,251
1882.....	23,935	708,927	6,841,659
1883.....	28,819	740,969	9,844,975
1884.....	22,377	579,489	7,452,421
1885.....	28,169	521,480	10,193,782
1886.....	24,300	693,364	8,157,239
1887.....	25,221	462,091	10,621,175
1888.....	13,973	384,933	2,188,783
1889.....	18,946	281,421	4,914,821
1890.....	37,320	252,836	17,699,849
1891.....	25,533	280,166	9,351,942
1892.....	50,905	534,230	29,719,585
1893.....			
Totals.....	594,332	8,620,843	230,914,781

[TO BE CONTINUED.]

THE BUFFALO ELEVATOR TRUST.

It seems to be very unfortunate that at this time, when the producer of wheat needs every advantage of minimum intermediate charges on his product, that there should be permitted to exist so iniquitous and hold a trust robbery as that practised by the grain elevators at Buffalo.

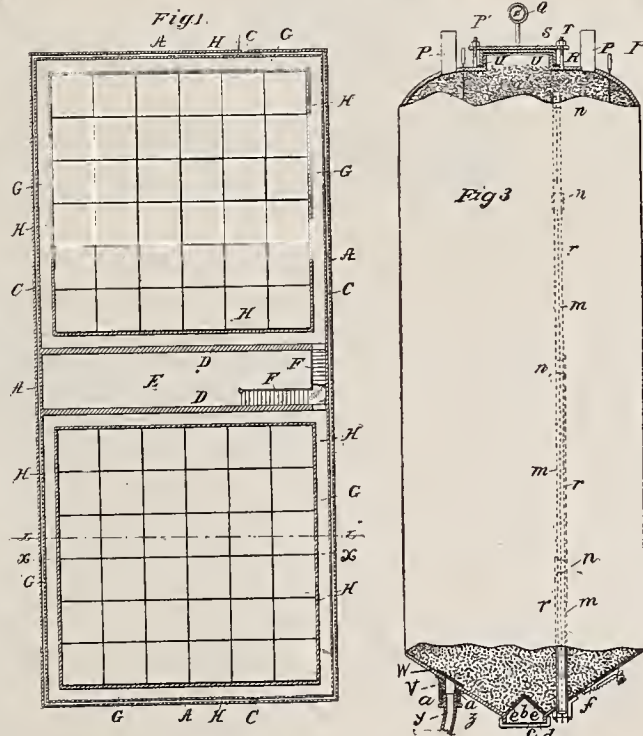
It is well known that, during the season of navigation, the enormous grain traffic on the Erie Canal from Buffalo to New York compels the railways engaged in grain carrying from the West to New York to reduce their freight rates. The rail rate for grain goes down as soon as the canal opens, and is promptly put up as soon as it closes in the fall. Hence the



TOP AND SAMPLE TUBE OF BOWKER'S BIN.

cheapening of grain transportation, due to the competition of the Erie Canal with the railroads, gives the Western farmer a cent or so more per bushel than he would receive otherwise.

Grain comes in by rail to Duluth, Superior, Chicago and Toledo, there goes into elevators, thence aboard lake vessels to Buffalo, because water transportation is always less costly than by rail. At Buffalo it again goes into elevators, whence it is transferred to Erie Canal boats or to railway cars. Buffalo has a great many elevators—more than even the vast grain trade demands. So they formed a trust, which has for several years exacted tribute from all grain going



PLAN OF BOWKER'S GRAIN STORAGE WAREHOUSE.

eastward, and thus robbed the Western farmers of a cent or two on every bushel of wheat they have sold.

A New York state law allows the elevators to charge no more than five-eighths of a cent for elevating. But the elevator trust gets around this by adding one-fourth of a cent for storage, even though the grain does not stay in the elevator an hour. Besides this, they make a vessel pay \$4 per thousand bushels for shoveling. They pay the shovelers \$2 for their work, and the other \$2 is added to the profits of the trust.

Time after time efforts have been made to break up the trust. New elevators have been built, but they have, one after another, been absorbed by the trust. One-third of all the elevators in Buffalo are run, the remainder being locked up. Again and again have efforts been made to pass a bill through the legislature to stop the extortion, but the elevator interest

has always proved stronger than the canal men. The trust pays dividends of 30 per cent. on its inflated capitalization, and fully 100 per cent. on the actual value of the elevators.

Last year a vigorous attempt was made to defeat the trust. Floating elevators were built, which took the grain out of the lake vessels and loaded it directly into canal boats. McDougall's whalebacks were engaged to store the wheat. Rates were reduced to one-eighth of a cent a bushel, at which they remained. Now the elevator trust has gobbled up the floating elevators and the old rate—seven-eighths of a cent for elevation and "storage"—is charged.

Thus it is seen that the Buffalo elevator trust draws tribute from every Western shipper whose primary market is any lake port.

It is easy to see what is the remedy, but it is difficult to apply it. The New York Legislature has the power to stop this robbery, but the elevator lobby has found enough corrupt men therein to prevent the passage of any bill for that purpose.—*Superior Telegram*.

SHIPPERS SHOULD USE MORE CARE IN REGARD TO WHOM THEY CONSIGN.

From time to time our attention has been called to the fact that very often shippers (and there are many of them) are not as careful as they ought to be with reference to making consignments to parties who are not legitimately connected with the trade.

The shipper is prone too often to place too much reliance upon the beautifully worded circulars that he receives from houses, or rather pretended houses, in very many of our large cities, claiming that they have unsurpassed facilities, etc., for the handling of all consignments, and who hold out glittering inducements whereby to catch the imprudent. Their circulars are generally couched in flowery language, elegant in diction and description, but, as a general thing, there will be found somewhere in this bouquet of roses a thorn, that will, to a certain extent at least, be felt; it may not be felt so distinctly upon receipt of the returns the first time, nor possibly the second, but if continued long enough the result will be disastrous.

It goes without saying that those who have been longest connected with the trade are more familiar with the market demands and requirements, are better equipped in every way to handle these consignments, and certainly have better facilities for their disposal than those who are not fully recognized by the trade, or, in other words, than those who carry their office in their hat. It is certain that within the past year there have been more "fake" houses of this description than ever before, and that a great many shippers have found this out to their sorrow.

The intelligent shipper needs no warning regarding this matter, because he is satisfied that the only way to do business legitimately is to consign to those houses who are well and favorably known and have a commercial standing. Consign to those houses that advertise through legitimate channels, or to those who are known to be reliable and honest in all their dealings, and who have gained a reputation by honest and fair dealings.—*Hay Trade Journal*.

Within a week from the time the McKinley duty on hay of \$4 was abandoned and the present duty of \$2 became operative, we witness a great activity all along the Canadian line in shoving hay forward into the States. Already a hue and cry has been raised by those directly affected.—*Hay There*.

Darwin said the amount of clover seed produced in any given locality was proportionate to the number of "old maids" there resident, which he proved by the following statement: "There can be no clover seed without the bumblebee, because no other insect fertilizes it. The enemy of the humblebee is the common field mouse, that steals into their nests and destroys the larvae and eats up the honey. The enemy of the mouse is the common house cat, and the solid friend of the cat is the old maid. Consequently the more old maids the more cats; the more cats the less mice, and the less mice the more bumblebees, the more bees the more clover seed."

THE RISE OF TRANSFER ELEVATORS.

Fifteen years ago all grain passing through Chicago and transferred from the cars of a Western road to those of an Eastern road was weighed on track scales. These weights were used as a basis of all purchase, sale and freight contracts, the inaccuracy of which was the cause of dissension and perpetual friction between the buyer, seller and transportation companies, from which there appeared no means of escape.

In the year 1880 E. S. Richards, then a large shipper of grain to Eastern and Southern markets, having suffered largely in common with other shippers, undertook to relieve the situation by the introduction of what is known as the hopper scale system of handling grain, whereby the grain was taken out of the Western cars by machinery, passed through hopper scales of a carload capacity each, and thence loaded into the Eastern cars, thus securing and retaining the absolute identity of each and every carload of grain and at the same time getting the net weight of the contents of every car without gross or tare. Plans were submitted to the Board of Trade of this method of handling grain, and officially indorsed by it and recommended for adoption to the Eastern roads, with whom negotiations were commenced for the erection of suitable grain transfer houses in the yards of the different outgoing Eastern roads at Chicago.

The first contract was made by Mr. Richards with the Lake Shore & Michigan Southern Railway Company in January, 1884, to build a transfer house with a capacity of about 150 cars per day, under which a house was built at Englewood at an expense of over \$20,000. The contract covered a term of ten years. The house was built without expense to the railroad company, and put in operation in June, 1884. It was continued in operation two years: the results were satisfactory, showing a saving in cost of transferring to the railway company, absolute accuracy in weights and identity of the property, meeting with such favor that a law was passed by the Illinois Legislature and put in operation July 1, 1886, known as the hopper scale law, by which it was required that the track scale system of handling grain should be abandoned in Chicago, substituting therefor the hopper scale system as provided and required by statute, and in which a mandatory provision requires the Board of Railroad and Warehouse Commissioners to carry out its provisions.

Mr. Richards says: "The weights secured at the Lake Shore transfer house at Englewood were promulgated by the Board of Trade weighmaster, who issued duplicate certificates for which a fee of 70 cents a car was paid and equally divided between the buyer and seller, the same weights being incorporated in the bills of lading and waybills of the Eastern roads as a basis of their freight contracts, and at the same time reported back to the Western roads upon which to make corrections of their original billing from the initial point of shipment in the West.

"The success of the hopper scale system of handling grain widened the breach between the grain dealers and the elevator factions and popularized it to such an extent as an effective alternative and substitute that it was regarded as a most dangerous innovation upon the immense storage elevator interests of the country in which the railroads were in close alliance. The confidence in these weights, both East and West, called out exactions from the owners of the property in the settlement of claims for shortage that were not only embarrassing to the elevators to which the property was consigned, but unprofitable to the railroads who had issued bills of lading predicated upon these weights and for which they were responsible as common carriers. It was often the case that a carload of grain weighed by the hopper scale system in Chicago would fall short 2,000 to 3,000 pounds from the weights of the initial shipper. Evidence of these facts are indisputable, as can be attested by reputable shippers who have lost thousands of dollars arising from these speculations."

The Richards Transfer Elevator is no more, but other transfer elevators have been constructed. The transfer elevator is growing in favor, and several of them are now being operated in Chicago. The best

one is in the Nickel Plate's Stony Island yards. The hopper scales are on the ground floor and are supported by substantial stone foundations. The scales are not affected by the wind as are some which are put in the top of small houses. The new transfer house on the Wabash at Forest Hill is also a good house, as well as the old house on the Grand Trunk at Elsdon. The Counselman Elevator on the Rock Island at Englewood does considerable transferring, but it is a private house. The Pan Handle, the Fort Wayne and the Lake Shore are still using Jumbo transfer cars despite the complaints against their unreliable weights. Some of the roads are still transferring grain by means of elevated tracks and shovels. No complaint has ever been made against the work of the transfer elevators, while complaints against the other methods of transferring are made continually. The calls for reform in this service as well as in other lines is ignored by the apathetic Grain Receivers' and Shippers' Association.

However, the transfer elevator with correct weights and the identity of the grain preserved is the coming means of transferring all through grain from car to car at railroad terminals.

THE DEATH OF THE OLD BUSHEL.

The above headline does not refer to the present bushel, as many of our readers would prefer, but to its predecessor. The facsimile of a part of the Confession of Old Bushel given herewith is taken from *The Miller* of London, which says: "We are indebted for the fol-

T H E

Last DYING SPEECH and CONFESSION;

BIRTH, PARENTAGE, and EDUCATION; LIFE, CHARACTER, and BEHAVIOUR,

OF THE

OLD BUSHEL,

Who was tried, cast, condemned, and executed at Fisherton, on Friday the 10th of August, 1792, on the New Drop, erected for that Purpose.

lowing curiosity to the kindness of Mr. Bryan Corcoran, than whom a greater authority on measures will scarcely be found, either in Mark Lane or elsewhere. This little skit on the so-called 'Old Bushel,' which made way for the Winchester measure, is cast in the form of a last dying speech and confession, a form of literature which was very popular in the 18th century among a certain class of society, and was yet alive when many readers of this journal had already reached the dignity of a tail coat. We have reproduced in facsimile, but on a reduced scale, this sheet, which bears the marks of many fingers and thumbs."

In the last dying speech and confession it is stated that

THIS furprising Trial came on before Mr. Justice QUARTER, at the Whipping-Post, on the Day above-mentioned. The principal evidence was a Mr. EIGHT GALLONS, of Winchester, who depofed, that the said *Old Bushel* had, for a great Number of Years (contrary to the Laws of his Country) held too much, particularly at Salisbury and Warminster, and for many Miles round the Country.

After a Hearing of two Hours and twenty Minutes (the Fact being proved to the entire Satisfaction of a crowded Court) the Jury, confitting of the principal and most respectable Yeomanry of the County, without hesitation, pronounced him *Guilty*. The Judge then proceeded to pass the awful Sentence of the Law, which he did in a very solemn and affecting Manner. He told the Culpit, that as the Nature of his Crime was so atrociously bad, so grofs a Violation of the Laws of his Country, and so diametrically oppofite to the Principles and Wishes of all *honest Men*, and the proof against him being so very plain, he could not hope for Mercy.—Botany Bay was too good for him; and his Prefence there would be a bad example to that Infant Colony.

He was then conveyed to the New Drop; and after the

usual Time was spent in curfing and swearing, by the *Corn Jobbers, Millers, and Maltsters*, he was turned off, amidst the joyful Acclamations of a numerous Concourse of honest Spectators.

OLD BUSHEL said he was born at Amesbury, in the Year 1745, and had several Brothers in that Neighbourhood; but believes they have, or shortly will, share the same Fate; and that Pride and Extravagance had brought him to this untimely End.

COST OF PRODUCING WHEAT UNKNOWN.

Crop Expert Prime of Dwight, Ill., says: The cost of the production of a bushel of wheat is, according to my way of thinking, an unknown quantity. Manufactured articles are produced upon an arbitrary basis of cost. By that I mean that you cannot go to work and manufacture a seeder, a reaper, a mower, a plow, or, in fact, any kind of agricultural implement except upon a basis of cost which has been established for all the raw material and all the labor which enters into the article to be produced.

"The manufacturer, if he has an order for a thousand farm wagons, which, I think, now sell at from \$50 to \$60, at once sits down and counts the cost before he gives a single order for their manufacture or the mechanic puts his hand to a tool with which the wagons are made. Before anything has been done the manufacturer knows to a dollar just what his profit will be upon the wagons.

"No such condition of things, however, exists when we go to work to grow a bushel of wheat. When we put it into the ground we never know that it will be harvested. We never know whether it will produce twelve or twenty bushels to the acre. We have not the slightest idea, for instance this season, whether at harvest it will bring 45 or 75 cents a bushel. All we actually know one way or the other about it is that we have seeded it, that we must trust to wind and weather and the laws of supply and demand for our reward. The cost of the production of a bushel of wheat depends almost exclusively upon an expenditure of muscle, which cannot be measured in any sense of the word by dollars and cents, but must be left to every man's individual opinion as to what it is worth himself.

"Two farms lying side by side, the one may be operated almost entirely by hired labor. Everything connected with putting in the crops must be bought and paid for with cash. When the crops are ready to be harvested they must be

sold at once to meet the expenses which have been incurred during the growing season. The farm which has been worked by the muscle of the owner, with the only addition of the muscle of his children, is able to produce a bushel of wheat much cheaper and below the cost of production to the farm than to the man who is obliged to hire and pay cash for everything. At harvest the farmer who has worked his land himself is not obliged to sell his crops, but he holds them until the time comes when his ideas with regard to prices and rewards for his labor are in harmony. The former farmer may have sold his wheat below cost of production, while the latter farmer will sell his at a profit. Hence, I say, no arbitrary law can ever be laid down which will establish any rules that can be used for general purposes to ascertain the cost of the production of a bushel of wheat."

Broom corn valued at \$3,974 was exported during August, against an amount valued at \$11,571 in August, 1893; and during the eight months ending with August broom corn valued at \$89,996 was exported, against an amount valued at \$110,487 exported during the corresponding months ending with August, 1893.

The rumors set afloat regarding the importation of grain should be closely investigated before placing much reliance on them. In the first place there is very little surplus grain for shipment to this country, without curtailing the shipments required for other quarters of the globe. Possibly a few lots of wheat and barley may be imported, but if any large amounts should be in demand, prices would soon reach figures which would prohibit their importation.—*Trade Bulletin*.

THE STABILITY OF GRAIN SILOS.

NO. III.

Reasoning further, and omitting or ignoring the accumulative pressure due to liquids at increasing heads, and adhering to the actual weight of the wheat alone, we have, as before calculated, 134 tons as the weight of the contents.

And allowing for the space lost by the hopping at the bottom, and the space unfilled at the top, at nine tons, and the weight of the pyramid of wheat which would pile upon the bottom (taking the angle of repose at $26\frac{1}{2}$ degrees) at five tons, deducting these amounts from 134 leaves 120 tons as the net dead weight in the silo to be accounted for. Then with the layers of wheat above the pyramid, following the same slope or angle of repose, viz., $26\frac{1}{2}$ degrees, the net weight of 120 tons will resolve itself into two angular forces tending outward and downward at the angles of $26\frac{1}{2}$ and 63 degrees respectively, of 55.5 and 107.5 tons; these angular thrusts, if again resolved into a direct thrust against the side at right angles, and a direct downward thrust against the bottom, the total horizontal thrust will be 96 tons, and the thrust upon the bottom 119 tons.

But these strains remain constant and consistent only so long as the wheat remains undisturbed; the moment that the slide is drawn, a central stream is set in motion, and the angle of the layers changes; the angles will increase and vary according to the velocity, from 33 to 45 degrees to at least one-third of the height of the contents, the bulk above 20 feet retaining its original angle of $26\frac{1}{2}$ degrees.

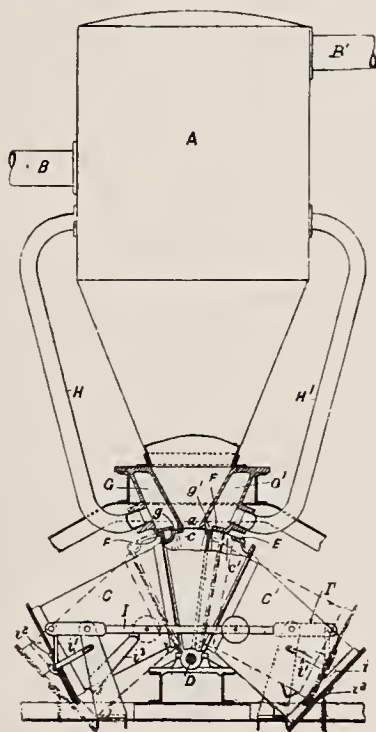
As the angles of the layers increase, so will the wedging or force against the side increase, while the thrust upon the bottom remains the same; thus at 33 degrees the horizontal thrust is 110 tons, while the downward thrust remains at 119 tons as before. When the angle increases to 45 degrees, the horizontal thrust and the downward thrust become equal, that is, the full weight of the contents, 120 tons, bears against the bottom and against each of the sides. The pressures against the sides in these cases are taken at the extreme lower part of the bin; that is, the pressures, ranging from 96 to 100 tons respectively, are tending to push out the wall at the bottom; at heights above this the pressures will decrease in proportion to the depth and weight of contents, at any particular level.

With the brick wall of a silo, the bottom being usually well supported at the footings, it would not reasonably be expected to give way at that point, as would likely be the case with a wood or other bin resting upon the surface. The weakest point or part most likely to break away is at about one-third of the height or at the set-off in the wall nearest to that point. As a wall of 60 feet in height would probably be divided into three lengths of thicknesses, say 20 feet of 30 inches, 20 feet of 24 inches, and 20 feet of 18 inches, entailing set-offs at 20 feet and 40 feet; these two heights, being the points most likely to first give way, are the parts requiring the most consideration: therefore, taking the first set-off, that at 20 feet from the bottom, deducting 20 from 60 leaves 40 feet of contents to be taken as weight, which gives 90 tons nearly; taking the lesser angle or angles of repose, viz., $26\frac{1}{2}$ degrees, as in the first instance, we obtain a horizontal thrust of 72 tons; then taking the contents above the second set-off, viz., at 20 feet in depth, and allowing for the enlarged section due to the thinner walls, gives the contents at 45 tons in weight, and the horizontal thrust becomes 35 tons; then the mean of the three pressures 96, 72 and 35, is $67\frac{1}{2}$ tons, which is the force tending to overthrow the wall at the first set-off 20 feet from the ground. Now the only resistance to this force of $67\frac{1}{2}$ tons pressing outward against the wall is the weight of the wall itself—the wall has no stiffening outside, such as buttresses—no support or fulcrum to bear against in resisting the load placed against it, and the only tie is the mortar connecting the cross walls to the front. If the junction of the cross walls be tied in a proper and effective manner with hoop iron at every few courses, then, with a span of ten feet between the cross walls, as in this case, half of the weight of the cross walls may be added to the resistance, this being

the greatest additional weight that could possibly be allowed.

If the front wall of a silo fell outward, pulling the greatest possible portion of the cross walls bodily with it, the line of rupture would be a diagonal from the front at the bottom to the top of the silo at the back; therefore, the portion above this line falling away with the front wall would be exactly one-half of the cross walls. At a greater length of front wall than ten feet between cross walls, the portion of cross wall torn away would become less, until at somewhere about 100 feet it would become nil; as with wind pressures on the outside of buildings, a straight wall 100 feet long between cross walls would receive no support from those cross walls whatever, and might be compared to a board standing on edge without support.

The resistance, therefore, is the weight of the front wall, half of the cross walls and part of the roof (the latter, however, gives little support to a silo), which, at 120 pounds per foot cube amounts to 130 tons, as against 67.5 tons' tendency to upset it. This is taking the most favorable view of the case, with the lesser angle and the grain contained at rest; but when the grain is being drawn off, and the greater angles of 33 to 45 degrees are brought to bear upon the walls, the



A DELIVERY APPARATUS FOR PNEUMATIC GRAIN CONVEYORS.

pressure is greater; and in all questions of strength, the greatest strain liable to be brought into play must be taken—in this instance, namely 85 tons—that is, 85 tons against 130 tons. The ratio of resistance to pressure should not be less than 5 to 3; therefore, this wall, although approaching this standard, requires some staying to make it efficient and secure.

Favorable as the above may appear, 85 tons' average upon the entire surface of the wall (which is equal to about $3\frac{1}{2}$ hundredweight per square foot) is a weight very much in excess of what would be allowed upon a concrete mill or warehouse floor of like thickness, even when stiffened and stayed with iron joists. —*Millers' Gazette, London.*

FEEDING WHEAT TO LIVE STOCK.

There is no doubt but considerable wheat is being fed to live stock, especially in quarters where the drouth has curtailed the food supply, and where the supply of old corn is somewhat limited. Farmers in many sections of the West have been feeding wheat to live stock since early last spring, and millers state that they are now doing quite a large business in grinding wheat for feeding purposes. In some instances, where farmers have good supplies of wheat and live stock, they have purchased machinery for the purpose of preparing it for feeding. There is little doubt but the feeding of wheat during the crop year will average 1,500,000 bushels weekly in the United States, especially if prices of corn and wheat should remain out of their usual proportion. —*Chicago Trade Bulletin.*

A DELIVERY APPARATUS FOR PNEUMATIC GRAIN CONVEYORS.

The rapidity with which the ancient methods of handling grain are being superseded, not only in America, but in Europe also, is only equaled by the growth of the business, made possible by increased crops in the great grain raising countries of the world. One of the greatest innovations in this line is the employment of pneumatics, but a little while ago an unknown quality as at present utilized.

The delivery apparatus for pneumatic grain conveyors, illustrated herewith, is but another step toward the useful employment of pneumatics in grain elevators. Letters patent have been issued for this apparatus to Frederic E. Duckham of London, England.

The invention consists of an apparatus for the conveyance of grain by an exhaust current of air used in combination with an exhausted hopper and an oscillating two-chambered air lock delivery box. These chambers are so arranged in mechanism that they are alternately put in communication with the supply hopper above. A valve controlled by the oscillation of the receiver establishes communication between the hopper and the chambers of the delivery box by by-pass air ports in the valve seat.

When one chamber or the other is in an upright position it is immediately filled from the hopper, the chamber then falls to its other extreme position, discharges its grain from a port in its bottom and recedes to its former position as the other chamber drops to discharge its load of grain.

The mechanism is said to work smoothly and without a hitch. The delivery box is well secured in its position. Through the means of this apparatus a rapid and continuous flow of grain is made possible.

The *London Times* says: "About a year ago a new method of discharging grain cargoes on the pneumatic principle invented by Mr. F. E. Duckham, engineer to the Milwall Dock Company, was described in the *Times*. The system had then just been carried out in a vessel appropriately named the Mark Lane. A somewhat similar vessel has now been built for the London Grain Elevator Company for use in the Royal Albert dock. She is called the Baltic and measures 115 feet long by 22 feet 6 inches wide and 11 feet deep, but differs from the Mark Lane in having nearly double per engine power and in having only two main suction pipes and grain receivers instead of six.

"The equipment consists of an ordinary compound engine of 500-horse power, which works four air-exhausting cylinders, producing a partial vacuum. Above the deck of the Baltic are two sets of apparatus for receiving, weighing and delivering the grain, either in sacks or loose, into lighters which lie on either or on both sides of the vessel. The chamber of each set of apparatus is connected with the exhaustor by a pipe on the one hand and with the grain in the ship by a flexible hose on the other. When the exhaustor is started the grain is sucked up from the ship's hold into each chamber and is automatically discharged thence into an open hopper, whence it is weighed and delivered into the barges.

"The contract working capacity of the Baltic is 100 tons per hour lifted 40 feet with the two suction pipes, and delivered into the barges, but on her official trial 180 tons of wheat were lifted and delivered in the hour. A demonstration of the working of the Baltic was given in the Milwall dock, at which a number of shipowners, engineers and others interested in the grain trade were present, when the capabilities of the vessel as shown at her official trial were fully sustained."

The demand for oats at the local markets at Kansas City has been good for some time. Receipts have been rather light, and mills and feed houses absorb the supply.

It is hard to understand why Milwaukee is able to pay 5 cents more for wheat than Chicago, but such is the case right now, and the explanation made at Chicago is that elevators are full to all intents and purposes and that the buying is not for consumption but to make storage charges and have the houses earn some money. —*Modern Miller.*

NEBRASKA LAND.

We've reached the land of drouth and heat.
Where nothing grows for us to eat.
For winds that blow with scorching heat
Nebraska land is hard to beat.

O Nebraska land! Sweet Nebraska land!
As on the burning soil we stand;
We look away across the plains
And wonder why it never rains,
Till Gabriel doth his trumpet sound
And says the rain has passed around.

We have no wheat, we have no oats:
We have no corn to feed our shoats.
Our chickens are too poor to eat:
Our pigs are squealing through the street.

The farmer goes into his corn,
And there he stands and looks forlorn;
He looks around and gets a shock
To find the shoot has missed the stalk.

Our horses are the improved race,
Starvation stares them in the face.
We do not live, we only stay,
We are too poor to get away.

—Nebraska Farmer.



[We invite correspondence from everyone in any way interested in the grain trade, or all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

TWO NEEDED CHANGES.

Editor American Elevator and Grain Trade:—There are two things in the grain business of this country which I think could be very desirably changed, and for which I hope the AMERICAN ELEVATOR AND GRAIN TRADE will contend under all conditions. These are, the adoption of the cental system for weights (in which, by the way, other countries are leading us), and the employment of clean bills of lading by railroad companies as well as vesselmen.

Respectfully, J. A. BROWN.
Chicago.

A CORRECTION.

Editor American Elevator and Grain Trade:—I notice a statement in the September issue of the AMERICAN ELEVATOR AND GRAIN TRADE to which I wish to call attention. It is there said that the Vladikavkaz Railway, having terminus in Novorossisk, penetrates Southwestern Siberia. As a matter of fact the Vladikavkaz Railway is a separate and independent line and has no connection with Southwestern Siberia or Central Asia. It penetrates the Caucasus and connects the Caspian Sea on the one hand with the Azov Sea (Rostoff being the terminus) with the Black Sea on the other, with Novorossisk as the terminus.

Very truly yours, ALFRED F. BENDER.
St. Petersburg, Russia.

GRAIN TRADE OF MONTREAL.

Editor American Elevator and Grain Trade:—Whenever I speak or write of the quality of our Canadian grain and the advantages which we possess as regards home markets or the facilities offered to us as exporters, I am very apt to grow enthusiastic. This is not for the reason that the conditions of our market are peculiarly exceptional, although I think them worthy of praise, but I am naturally inclined toward optimistic views, and the more so as the present outlook of the grain trade in Canada is very encouraging.

It may be that a brief statement of the grain trade in Montreal would be of interest to your readers. During last year the value of the exports of grain and its products from the Dominion amounted to the sum of \$16,200,000. A large part of this business was handled by the grain commission men of Montreal and its flour dealers. There has been a steady growth in the shipping of grain via Montreal ever since the year 1846. In that year the exports via the St. Lawrence route amounted to half a million barrels, and as many bushels of wheat and flour, the greater part of which went to Great Britain. Two years later the exports amounted to 968,605 bushels, and in 1849 the exports of breadstuffs had increased to 3,000,000 bush-

els. A few of the dealers in grain at Montreal in those early days were: Hon. John Young, George Denham, Hon. Louis Renaud, C. J. Cusack & Co., and Rimmer, Gunn & Co. None of these firms are in business now, and new companies have taken their places.

It has been long since adjudged true that to grain exporters the St. Lawrence route, via Montreal, possesses advantages offered by no other route in America. Were the inland and ocean freight rates properly adjusted it would be possible for Montreal to secure, in summer at least, a much larger portion of the export trade than she actually does. It seems impossible, however, to arrange the matter of freight rates in a condition satisfactory both to carrier and shipper. Yet thirty years have made a great difference in the forwarding rates on grain. The old rate of 6½ cents per bushel on grain from Kingston to Montreal has been reduced to 2½ cents.

The grain merchants of Montreal have been doing a very good business during the past four years. During 1890 we handled and exported 2,623,050 bushels and barrels of Canadian grains and flours, valued at \$2,917,076. The exports of American grain via Montreal during the same year were greater than that of Canada, being 8,980,223 bushels and barrels, valued at \$5,122,300. Last year, however, the conditions were reversed. The value of Montreal's exports of Canadian produce proper last year was \$8,000,000 greater than that of 1890, and the quantity had increased by over 12,000,000 bushels. The exports of American produce via this port last year were 6,827,794 bushels, valued at \$4,857,345. The outlook at the present time is promising, and I think our grain dealers will have no reason to complain at the results of this year's business.

Very respectfully, UNICORN.

NEW ELEVATOR AT KILBOURN CITY, WIS.

Editor American Elevator and Grain Trade:—Our elevator, which was built in August, is 32 feet, with a 34-foot frontage on railway tracks. The building stands on a 2-foot foundation over a cellar 12 feet deep, the floor of which is solid rock. From the bottom of the cellar to the top of the cupola is 80 feet. In the cellar is the engine room, 12x16 feet, built of brick with iron sheathing wherever wood is exposed. We have a No. 10 Lewis Gas Engine of 10-horse power.

There are three grain sinks with a capacity of 250 bushels each for receiving grain in connection with a 75-bushel hopper on the track. Grain is dumped into the hopper from a bridge at the end of a two-story annex 18x34 feet. The upper story of this annex is used for the storage of clover, and in the lower story are the office and two receiving rooms, one of which contains the hopper and scales. In the other receiving room we take in clover, beans, etc., which are elevated on a platform elevator operated by the engine and dumped in a hopper overhead.

From the hopper the clover seed goes to a No. 5 Clipper Cleaner with a capacity of 50 bushels per hour. This is situated on the first floor of the elevator proper, and is run by the engine. The seed is sacked from a sack spout convenient to the elevator in the cellar. After being sacked the seed goes to the first floor to be weighed, and thence to the second floor of the annex, to be stored. On the first floor of the elevator is a Monitor Dustless Grain Cleaner with a capacity of 200 bushels per hour.

There are 13 grain bins with a total capacity of 21,000 bushels, two being over the grain cleaning machinery. Three shipping bins are over the hopper and scales, which weigh all grain before it goes into the cars.

Another two-story annex is 48x36 feet, and has a cellar 12 feet deep. This is used for storing potatoes, etc. The first floor is frost proof. It is on a level with the floor of a car on track. At the front and rear is a porch 7 feet in width: also a platform for receiving and another platform close to the track for shipping. The capacity of this floor is 20,000 bushels potatoes. The second floor is on a level with the second floor of the other annex and has a storage capacity for seed, beans and other sacked commodities of 10,000 bushels.

About 80 feet from the elevator is our office building, 16x20 feet in size. There is here a 4-ton wagon

scale, with beam in the office. We have four other scales in the different buildings for the weighing of grain, etc. The elevator was built by George Le Paron, representing Barnett & Record. We now have everything in perfect order and in an up-to-date condition.

Very truly yours, SALMON BROWN.
Kilbourn City, Wis.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—Markets have been very dull of late. Very little business has been done notwithstanding the low prices on stuff. Jobbers have a large stock generally and do not feel much like buying more until the country shows some sign of life.

Receipts and exports for September, 1894, compared with September, 1893, are as follows:

RECEIPTS FOR SEPTEMBER.

Articles.	1894.	1893.
Cotton Seed meal, tons.....	297	.....
Corn, bushels.....	301,703	582,711
Wheat, bushels.....	1,242,545	401,069
Oats, bushels.....	1,268,416	1,041,532
Rye, bushels.....	13,830	1,590
Mill Feed, tons.....	2,652	3,336
Oatmeal, sacks.....	4,325	2,790
Oatmeal, barrels.....	3,172	4,563
Cornmeal, barrels.....	1,445	9,505
Malt, bushels.....	95,655	80,310
Barley, bushels.....	3,685	8,883
Hops, bales.....	624	406
Peas, bushels.....	.....	.....
Buckwheat, bushels.....	600	.....
Flour, barrels.....	161,005	124,149
Flour, sacks.....	285,752	193,081
Hay, cars.....	2,403	1,846
Straw, cars.....	94	92

EXPORTS FOR SEPTEMBER.

Articles.	1894.	1893.
Wheat, bushels.....	327,530	671,999
Corn, bushels.....	73,548	293,687
Oats, bushels.....	2,845	.....
Peas, bushels.....	2,566	.....
Barley, bushels.....	.....	.....
Buckwheat, bushels.....	.....	.....
Cornmeal, barrels.....	1,368	3,680
Oatmeal, barrels.....	600	580
Oatmeal, sacks.....	4,174	5,616
Flour, sacks.....	281,931	246,514
Flour, barrels.....	30,581	30,304
Mill Feed, bags.....	12,058	6,268
Hay, bales.....	12,250	41,217
Straw, bales.....	.....	.....

Wright & Cushing have succeeded Wright & Reed, grain dealers at Bethel, Vt. Gay & Waterhouse have bought out the grain business of C. A. Holt & Co., at Billerica, Mass. D. F. Parker, formerly alone in business, has formed a copartnership with A. J. Lane, formerly with D. W. Ranlet, to do a grain and feed business, making a specialty of wheat.

E. J. Bliss, Eastern manager at Boston for the Northwestern Consolidated Milling Company of Minneapolis, Minn., was injured in a railway accident a short distance from Chicago on September 10, and one of his legs had to be amputated. He is now doing as well as possible at the St. Luke's Hospital at Chicago, and has wired his friends in Boston, "One leg is enough for any man."

BUNKER HILL.

FREE STORAGE IN RAILWAY TERMINAL ELEVATORS.

Editor American Elevator and Grain Trade:—As a representative (in a modest way) of the grain trade of Manitoba I have to thank the AMERICAN ELEVATOR AND GRAIN TRADE for its stout advocacy of the rights of shippers in the elevator and grain business, and its denunciation of the methods sometimes practised by our whilom enemies, the railroads. Certainly something is out of joint when elevators are compelled to pay a yearly rental for the ground they occupy on railroad land, and is in sad need of immediate adjustment.

There has been quite a general reduction in freight rates on grain recently, on account of the low prices of cereals: and in the wake of this movement have followed reductions, in a greater or less degree, of elevator charges. The Great Northern Railroad Company has reduced its elevator rates at Duluth about one-half of the former rates—to ½ cent per bushel for receiving, elevating and discharging, inclusive of 15 days' free storage. A few other and similar reductions have been announced or are contemplated, I believe. Well and good. But will anyone call me a visionary

lunatic if I suggest that these charges ought to be done away with altogether? Why not? Railroad elevators are simply freight and storage warehouses built for the purpose of handling part of the railroad traffic. There are storage houses for other classes of freight, and under some restrictions ordinary freight is handled and stored without charge. Why should there be heavy charges for handling grain, materially affecting its price, and no terminal charges for dry goods?

It may be true that grain is not so easily handled as some other classes of freight, but it seems to me that the charges for handling it have been altogether excessive and anomalous with its value. No reasonable shipper (not even I) would object to paying charges for storage, etc., if such were placed upon the basis of ordinary freight. Anyhow, now that the rates are showing a tendency to come "our way" none of us, I hope, are going to stand in the way of its descent; rather let us sweep the way for it. WINNIPEG.

INSPECTION FEES AT ST. LOUIS.

Editor American Elevator and Grain Trade:—In "The Exchanges" column of your journal for September appeared a notice of preliminary action of our Merchants' Exchange in regard to charges for grain inspection and weighing at St. Louis. The committee appointed to investigate the matter was authorized by the board of directors of the Exchange to make inquiry as to the management and working of the Grain Inspection Department with a view to a possible reduction of the inspecting and weighing fees.

The charges here have been advanced to 75 cents. If anyone thinks these charges are at all just let him compare them with inspecting fees at other points. At Chicago 25 cents per car is charged, at Baltimore 25 cents, at Toledo 30 cents, at Minneapolis 20 cents, and at Philadelphia 30 cents; such rates including weighing charges also. So our committee reported, pointing out the fact that in 1892 at the city of Baltimore were inspected 47,219 cars, at a total expense of \$16,343.39, while in the same year there were inspected at St. Louis 39,634 cars, at a total expense of \$30,880.35. It will thus be seen that at Baltimore there were handled 7,585 more cars than at St. Louis and at an expense of \$14,537.26 less.

The committee reported that the annual expenses of the department amounted to \$29,150, and gave it as its opinion that the offices of registrar and weigher were illegal, or at least superfluous, and could and should be abolished.

Upon receiving the committee's report the Exchange adopted a resolution which will leave no uncertainty as to our stand on the question. It is as follows:

Resolved, That in the opinion of the board of directors of the Merchants' Exchange of St. Louis the recent advance in the charges for grain inspection established by the Board of Railroad and Warehouse Commissioners is exorbitant, illegal and unjust and unnecessary if the business of the inspection department is conducted on an economical basis. Therefore we protest against such advance, believing that the charge of 40 cents per car for inspection and weighing is sufficient for the necessary expense of grain inspection and weighing in St. Louis, that amount being more than is charged in other competing markets for like service; and further, that if said Board of Railroad and Warehouse Commissioners persist in imposing this unnecessary expense on the grain trade of St. Louis, this board will use all lawful means to contest same in the courts and before the Missouri Legislature.

To be sure there is another side to the controversy—there's a wrong side to everything. Chief Inspector O'Shea, for instance, is entirely satisfied with present arrangements, and charges our committee's report with being untrustworthy. The Board of Railroad and Warehouse Commissioners took the same position as the chief inspector, agreeing that the Merchants' Exchange was all wrong, and further alleging that we "defeated every attempt on the part of the Illinois Legislature to pass laws establishing public inspection and weighing in East St. Louis for the protection of grain shippers," and other inane remarks with which I will not take up the space of the AMERICAN ELEVATOR AND GRAIN TRADE.

If the Missouri State Grain Inspection Department or the Missouri Board of Railroad and Warehouse Commissioners will kindly tell us how to successfully compete with other grain handling centers, (place

us on an equality with Baltimore, for instance), under prevailing conditions, I will hazard the opinion that we will all be satisfied—even the millers and country shippers, who, Mr. O'Shea says, would rather pay \$1 per car under the present management than have a possible change. Which, by the way, evades the principle involved.

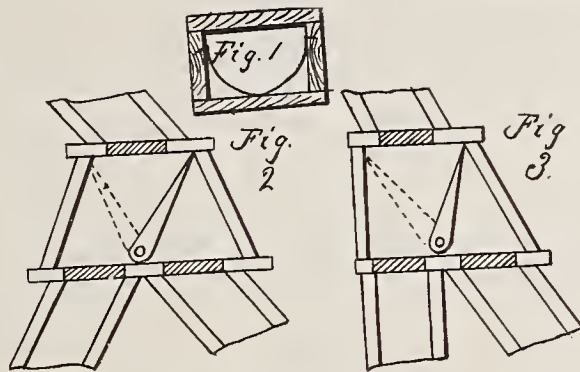
If we have to go on maintaining an expensive inspection department and a board of commissioners that levies burdensome and trade-killing taxes we cannot long maintain our position among competitive grain centers.

CONSIGNEE.

SPOUTS AND SPOUT VALVES.

BY L. BILDER.

One of the important features of a good elevator is proper spouting. Spouting is made of tin, iron and wood. The wooden spout is commonly used and is

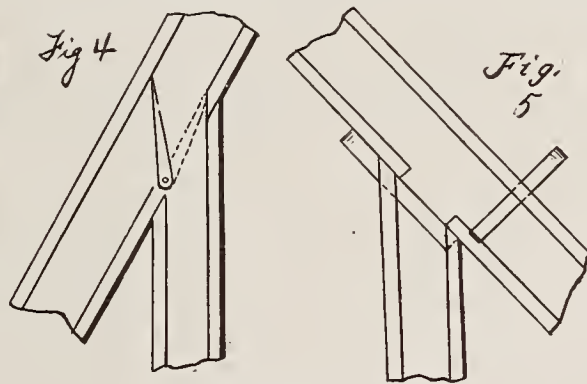


SPOUTS AND SPOUT VALVES.

to be preferred to tin or iron for ordinary purposes. Poplar and white pine lumber of fine grain, and free from knots as possible, is desirable material.

To prevent the wearing away of the bottom of the spout it should be lined with iron or tin, or at least smoothly dressed on the inside with a plane, not sandpaper. If it is necessary to have a spout with such a fall that the grain does not run freely the defect may be remedied by putting in a rounded tin lining or bottom, as shown in Fig. 1, which will add considerable ease to the flow.

In putting up spouts it would be well to remember that they should generally have a fall of not less than



SPOUTS AND SPOUT VALVES.

25 or 30 degrees. If the spout is tinned, as in Fig. 1, wheat will flow slowly in a spout set at an angle of 20 degrees. A feed spout should properly be set at an angle of 60 degrees to allow a free flow.

Wooden spouts are sometimes made diamond shaped so as to make them land square with the building, but for my part I consider them a doubtful improvement. It takes about a third more material to make a diamond spout than a square one, and the stock flows no better, and sometimes not so well. Hand holes may be made in the spout according to one's own idea of the most convenient place. It has been my experience that choke-ups begin oftener at the point of the landing of the spout, and so at this point I have a lid of 12 to 14 inches long, which is preferable to a hand hole, I think.

Valves also may be constructed according to requirements, and their styles are as various as are the ideas regarding them. They are very easily constructed to conform to different spouts and purposes. They are used to send stock in two or more different directions, to mix grain or to divide a stream. A few of the many different styles are shown in Figs. 2, 3, 4 and 5. I have seen them all used with very satisfactory results.

CHAFF.

A Kentucky farmer who has 1,560 acres in corn is called a "corn king." In Kansas he wouldn't be more than a count or a prince.

Farmers never will be satisfied; they even object to selling 45-cent wheat to buy \$1 potatoes with which to feed the threshing hands.

"Make hay while the wind blows" is the modification of some advice given to farmers expecting to raise the highest grade of hay.

The Pop. leaders of the Northwest are working for elevators. They have the same old motto, "Anything to be elevated into office."

Paddy (eating green corn for the first time)—"Be jabbers! Oi wish whoever sewed this corn on the cob had pulled out the bashtin's."—*Judge*.

Stibbins—"Why do they speak of the elevators at Buffalo as 'floating elevators,' I wonder?" Bibbins—"Because they're never in the pool."

A Cloud county man, who didn't care whether it rained last month or not, sold \$2,000 worth of alfalfa seed from 170 acres of land last summer.

Visitor—"Is your pa at home?" Farmer boy—"Yaas, round ahind the barn thrashin'." "Wheat or oats?" "Lightnin' rod man." "Ha! then I'll wait till he gets through. I'm a farmer myself."

"What," asks the editor of the Manhattan *Nationalist*, as he wearily lays down his field glasses, after searching the horizon in vain, "has become of the old-fashioned Populist who used to talk about a government warehouse where he could deposit his crop and draw 80 per cent. of its market value in cash?"

Lord Englishy (traveling in America)—"Aw, now, you know, what do you Americans do with these immense cwops of maize?" Miss Catchim (from the West)—"Oh, we eat what we can and can what we can't." And Milord was lost in troubled thought and vague, abstruse speculation for the rest of the day.

The dainty bit of a summer girl in a bewildering fluff of gown was twittering sweetly to the rural youth, and he was so tickled he couldn't sit still. She had only been in the country two days and had met him that morning.

"Is it always so warm as this in the country?" she inquired.

"You don't think this is warm, do you?" he responded.

"Indeed, I do; I think it is positively hot."

"Likely it is, but it is fine weather for corn."

She looked at him doubtfully and blushed. "But I have no corns," she said, and he fell off the porch in a paroxysm.

ORIGIN AND OBJECT OF THE ELEVATOR POOL.

The Buffalo Grain Elevator Trust was inaugurated twenty years ago by the New York Central and Erie Railroad corporations for the sole purpose of crippling the Erie Canal. During this time numerous elevators have been constructed with the avowed purpose of elevating grain at a reasonable rate, but every elevator has invariably drifted into the trust. In the last two years several elevators were constructed with the determination to operate outside of the robber trust. These elevators were transferring nearly all grain that came to Buffalo for $\frac{3}{4}$ of 1 cent a bushel, a half cent below trust rates. Finally, several railroad corporations, who now control the pool, decided to elevate grain free, thereby forcing all outsiders into the combine to slaughter the Erie Canal. The result is that now there are fifty elevators in the pool, and canal grain is forced to pay seven-eighths of one cent a bushel.

The most aggravating part of the whole matter is that ten of the best elevators are capable of handling every bushel of grain that enters Buffalo harbor; however, they levy a toll on canal grain sufficient to pay big dividends on the forty useless, idle elevators. This is not all. This railroad grain elevator trust not only shamefully discriminates against the Erie Canal, but they most brazenly give railroad line propellers a preference over individual vessel owners at the elevators in Buffalo.—*Canal Defender*.

THE PRODUCTION AND CONSUMPTION OF RICE IN THE UNITED STATES.

NO. I.

The production of rice in this country has within recent years assumed increased importance, and information in regard to it is increasingly sought. Heretofore, the only statistics collected under national authority in regard to this crop were those of the census, but some of the rice-producing states have published statistics of their own production for certain years and various commercial estimates have been published from time to time. The Department of Agriculture is now obtaining information on this subject from original sources, but that which is presented below relates to past years and is necessarily from such sources as were available, including private commercial estimates. The following table contains the figures of the last five censuses of the United States and shows our production of rice, by states, at intervals of ten years, from 1849 (or 1850) to 1889, inclusive:

TABLE I.—RICE CROP, BY STATES, AS SHOWN BY EACH CENSUS FROM THE SEVENTH TO THE ELEVENTH, INCLUSIVE.

States.	1850.	1860.	1870.	1880.*		1890.*	
				Area.	Product.	Area.	Product.
	Pounds.	Pounds.	Pounds.	Acres.	Pounds.	Acres.	Pounds.
Alabama	2,312,252	493,465	222,945	1,579	810,889	810	399,270
Arkansas.....	63,179	16,831	73,021			9	7,110
California.....		2,140					
Florida.....	1,075,090	223,704	4,1687	2,551	1,294,677	1,787	1,011,805
Georgia.....	38,950,691	52,507,652	22,277,380	34,973	25,369,687	18,126	14,556,432
Kentucky.....	5,688						
Louisiana.....	4,425,349	6,331,257	15,854,012	42.00	23,188,311	84,377	75,645,433
Michigan.....		716					
Minnesota.....		3,286					
Mississippi.....	2,719,856	809,082	374,627	3,501	1,718,951	1,543	676,746
Missouri.....	700	9,767					
North Carolina.....	5,465,868	7,593,976	2,059,281	10,846	5,609,191	12,241	5,846,404
South Carolina.....	159,930,613	119,100,528	32,304,825	78,388	52,077,515	42,238	30,338,951
Tennessee.....	258,854	40,372	3,399				
Texas.....	88,203	26,031	63,844	335	62,152	178	108,423
Virginia.....	17,154	8,225				3	360
United States.....	215,313,497	187,167,203	75,635,021	174,173	110,131,373	161,312	128,590,934

* The figures given in the census of 1880 and 1890 are for the years 1879 and 1889. It is probable, too, that the figures of the seventh, eighth and ninth censuses really relate to the crops of 1849, 1859 and 1869, respectively, instead of to those of 1850, 1860 and 1870.

The following estimates of the quantities of cleaned rice produced in the United States, with their values on the plantation where produced, are found credited to the Cincinnati *Price Current*:

TABLE II.—ESTIMATED RICE CROP OF THE UNITED STATES FOR 1888-1893.

Years.	Quantity.		Value.
	Pounds.		
1888	124,733,200		\$2,650,580
1889	* 131,722,000		2,799,092
1890	136,750,000		3,589,687
1891	+ 155,665,600		3,502,476
1892	+ 237,546,900		3,860,137
1893	135,000,000		2,868,750

* This estimate exceeds the census figures for the same year by 3,131,066 pounds.

+ Mr. A. Harkness, British consul at Charleston, reported the crop of 1891 at 497,491 barrels of 300 pounds, or 149,247,300 pounds. This estimate, though smaller than that given in the table, includes for Louisiana a considerably larger estimate than that of the commissioner of agriculture of that state. The two estimates for Louisiana compare as follows:

Estimate used by Consul Harkness, 344,533 barrels of 300 pounds	Pounds.
	103,359,900
Estimate of state commissioner of agriculture	78,192,855

Difference..... 25,167,045

If the estimate used by Consul Harkness were reduced by this amount his total for the United States would be reduced from 149,247,300 pounds to 124,080,255 pounds. This is 4,510,679 pounds less than the crop of the census year, as shown in Table I, and is probably too low.

‡ This seems a high estimate, but the crop is known to have been a very large one, and other estimates have placed it at 200,000,000 pounds or more. The New York *Shipping and Commercial List* of Jan. 24, 1894, published an estimate of 182,400,000 pounds.

The foregoing tables show that great changes have occurred since 1850 both in the total rice production of the country and in the relative importance of certain of the chief rice-producing states. It will be seen that the total crop, stated in round numbers, fell from 215,000,000 pounds in 1850 to 187,000,000 pounds in 1860 and to less than 74,000,000 pounds in 1870. The heavy reduction during the decade 1860-1870 was, no doubt, mainly due to the war and to the consequent change in the industrial system of the South, to which up to 1870 there had been little time for the rice in-

dustry to adjust itself. The census of 1880 shows an increase, and that of 1890 an additional one: but even the crop reported in the latter census, viz., the crop of 1889, was little more than two-thirds as large as that of 1860 (1859?), as reported in the eighth census, and not quite three-fifths as large as that of 1850 (1849?) reported in the seventh. If, however, we pass from Table I to Table II we find that the estimate of the Cincinnati *Price Current* for 1892 makes the crop for that year over 22,000,000 pounds larger than the crop reported in the census of 1850.

The rapid increase of rice cultivation within recent years has taken place chiefly in Louisiana. That state produced less than 4,500,000 pounds of the 215,000,000 pounds grown in the United States in 1849 or 1850, while South Carolina produced nearly 160,000,000 and Georgia nearly 39,000,000 pounds. At the end of the next decade the rice product of South Carolina was nearly 41,000,000 pounds less and that of Georgia nearly 13,500,000 pounds greater, but the crop of Louisiana was still insignificant, being a little over 6,300,000 pounds. Of the crop reported in the census of 1870 Louisiana produced a largely increased pro-

portion: but this crop was very small as compared with the crops of the two preceding censuses, and the increase of the Louisiana crop from less than 3½ per cent. of the whole in 1860 to nearly 22 per cent. in 1870 represented an absolute increase of not much over 9,500,000 pounds in the product of that state. But while the product of the chief rice-growing states on the Atlantic seaboard had largely decreased that of Louisiana, small as it still was, had increased by about 150 per cent. Of the crop of 1879 Louisiana produced 23,188,311 pounds. This was an increase of over 7,300,000 pounds in the quantity produced in the state, but the proportion of the total rice product of the country was a fraction of 1 per cent. less than at the preceding census. Within the next ten years, however, there was a large increase both in the quantity produced in the state, which rose from 23,188,311 pounds in 1879 to 75,645,433 pounds in 1889, and in the proportion which this product formed of the total rice crop of the country, this having risen from about 21 to nearly 59 per cent. In 1879, the crop of South Carolina amounted to a little over 52,000,000 pounds, an increase of nearly 20,000,000 pounds over the product of the same state at the preceding census. Up to this time South Carolina had long held the first place among the rice-producing states, her contributions to the total product of the country, as shown by the censuses of 1850, 1860, 1870 and 1880, having been, respectively, about 74, 64, 44 and 47 per cent. In 1889, however, her crop, amounting to 30,338,951 pounds, constituted less than 24 per cent. of the total crop of the country, while that of Louisiana, as we have already seen, had risen in one decade from a little over 21 to nearly 59 per cent.

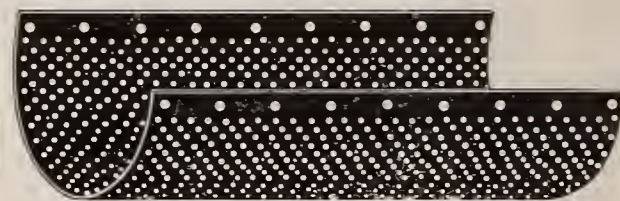
The rapid strides made in rice culture in Louisiana appear to have been due to the introduction of labor-saving machinery into the industry. This began in Southwestern Louisiana, a part of the state where rice had previously been cultivated only to a small extent for domestic use. In a pamphlet on Southwest Louisiana on the line of the Southern Pacific Company, distributed by those in charge of the Louisiana exhibit

at the World's Fair, it is stated that "rice raising for commerce began in Southwestern Louisiana with the advent of the Iowa colony and twine binding harvesters in 1884." It appears, however, on the same authority, that in that year only one of these machines was used, this having been put in the field by Mr. Maurice Brien of Jennings, Calcasieu Parish. The same pamphlet presents the following figures as to the number of twine binders in use in succeeding years: 1885, 5; 1886, 50; 1887, 200; 1888, 400; 1890, 1,000; 1891, 2,000; 1892, 3,000. This is evidently a very rough and ready sort of statement, with little claim to statistical accuracy; but it may be taken as an indication that the use of these harvesters, having been once begun, extended very rapidly.

[TO BE CONTINUED.]

A CONVEYOR BOX LINING.

We illustrate herewith a perforated conveyor box lining manufactured by the Robert Aitchison Perforated Metal Company, 269 Dearborn street, Chicago. This company is prepared to furnish conveyor lin-



A CONVEYOR BOX LINING.

ings in all thicknesses and sizes, rolled to fit, and with screw holes in margins.

They also make a full line of perforated metals for milling and grain cleaning.

DOTS AND DASHES.

Reports from the Northwest go to show that farmers are storing considerable wheat in interior elevators.

From September 1 to October 6 the receipts of clover seed at Toledo, Ohio, were 25,255 bags and shipments 6,434 bags.

"Coals to Newcastle" is the shipment of grain into the rural counties of the great cereal producing states of Iowa, Kansas and Nebraska.

The grain blockade which threatened Chicago for the past few weeks has lifted, and the Western roads are again taking all the freight they can procure.

The first car of new buckwheat to be received at Chicago arrived from Michigan September 21. It was of good quality and sold at \$1.50 per 100 pounds.

Rahr Bros. of Manitowoc, Wis., have an order for 25,000 bushels of malt made of white winter wheat. Malt made of wheat is something new in that country.

The Southern states raised about 350,000,000 bushels of corn last year, but this season they will probably have 500,000,000 bushels, and can spare 150,000,000 bushels for export.

A New York commission man, who is somewhat of a wit, says that "America is educating the hog to eat wheat and sending agents abroad to educate the people to eat corn."

From all sections of the prairie hay country comes the complaint that Canadian hay is beginning to make itself felt in the Eastern markets to the detriment of the American hay-raiser.

Rapid destruction of tin roofs may be charged to the use of green sheathing boards, the placing of tin on roofs where acid vapors arise through the building, the use of acid tar and acid tar papers.

Barley malt aggregating 3,874 bushels, valued at \$4,227, was imported during the eight months ending with August, against 1,585 bushels, valued at \$1,932, imported during the corresponding months of the year preceding.

In the month of September New York exported 4,806 bags of clover seed, against 21,437 bags in the same time in 1893. From January 1 to September 29, 84,761 bags were exported, against 38,200 bags in the same time in 1893.

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 5. Who Has Elevator for Handling Small Grain and Ear Corn?—I am thinking of building a small grain house, one that will be equally adapted to the handling of small grain and ear corn. I can get either of these singly, but the combination of the two in a convenient, labor-saving, inexpensive house I have never seen. Where can I see such a house, or the plans for same? I would prefer to see the house in operation, if possible. Any information will be appreciated.—L. SIMONTON, Lebanon, Ohio.

THE SHIPPERS' RIGHTS.

A bill of lading serves two distinct purposes—that of a receipt and that of a contract, says an exchange. As a receipt it is less strictly and literally construed than as a contract for transportation. Between the original parties to it, shipper or carrier, or carrier and consignee, its recitals as to quantity, quality, weight, condition, value, etc., may be explained, modified or contradicted by oral testimony. Nor is it necessarily conclusive of the receipt of anything for shipment, though it is presumptive evidence of the receipt of whatever is thereby contracted to be transported even when receipt of the same is not specially acknowledged. Considered as a contract, it cannot ordinarily be changed in its terms or legal import by verbal evidence, nor affected by any prior or contemporaneous verbal agreement, though ambiguities in it may be explained, and fraud will vitiate it. However, in Pennsylvania, where a bill of lading is issued in the usual form and a verbal arrangement is made at the same time, both are taken into account to determine the contract, and in Maryland proof of a contemporaneous conversation has been admitted in evidence. A bill of lading containing a modification of a verbal contract previously made by a carrier and shipper, and accepted by the latter without noticing the change, it has been decided in Kansas, and would probably be held elsewhere, does not supersede the prior verbal agreement which may be proved by the shipper in an action against the carrier. "Marks" on freight that serve for an address, copied into a bill of lading, can only assist in identifying the freight and will not be permitted to contradict the language used in the bill of lading.

The consequence of misdescription in a bill of lading, where such misdescription works an injury to anyone, must so far as possible be borne by the party making it. If it is made by the shipper, through fraud, the carrier is, on account of it, exempted from liability, except for such care as should be given to freight of the class described. Any material concealment or suppression of the truth as to the nature of that which is to be transported will relieve the carrier from liability, as a carrier can be charged as an insurer only when treated in good faith. To illustrate: A carrier is not liable for an injury sustained by articles of great value rolled up and designated as something of little worth. And the same is true where bank bills or specie is packed and closed with goods of a common sort and shipped as freight. But if the misrepresentation of the shipper is palpable, the carrier cannot set it up as a screen from liability. And a misdescription in a bill of lading made by the carrier is not binding on the shipper. Whenever a carrier's compensation is injuriously affected by any misdescription of the shipper's that fact, under the rule above stated, will, upon discovery of the misrepresentation, warrant a correction of the rate charged.

In Iowa and Texas a carrier cannot be exempted from any liability by contract. In New York, on the other hand, it may be exempted, by special contract, from all liability. In the other states the general rule is that the implied liability of a carrier can be limited by special contract, but not to the extent of exempting it from any liability for loss or injury growing out of its own or its servants' negligence.

Many of the attributes of negotiable paper attach to a bill of lading, and in some of the states it is given

all of them by statute. It is transferable by indorsement and delivery, or, when indorsed in blank, or made out for delivery of the freight to bearer, by delivery only. Such a transfer of it, for value, will cut off the vendor's right of stoppage in transit.

When a bill of lading is attached to a draft or bill of exchange, that makes its transfer condition, and, until the latter is paid, or accepted, if payable in the future, title to the freight does not pass.

SPONTANEOUS COMBUSTION OF CLOVER HAY.

A great many persons do not believe that spontaneous combustion of clover hay, or, in fact, any other kind of hay, is possible. Scientists have been telling us so for a great many years, and giving abundant and very wise reasons to demonstrate that such a thing is impossible. It is, however, not only possible but a very serious and solemn fact, and many cases of barn burning, for which the pipe or cigar of the tramp the farmer's boy, or the farmer himself is blamed, are due to nothing else but spontaneous combustion. So far as we know, spontaneous combustion is confined alone to clover hay, put up too wet, or with too many green bunches, or in too large amounts. There is something mysterious about this combustion of clover hay. In some years the instances are rare, and in others very frequent. They are very frequent in some sections of the state, and quite rare during the same year in other sections. We do not care to go into the philosophy of it and give the many wise reasons why it does not occur, for it does occur in fact; or the many other wise reasons why it does occur, when the facts are so clearly established as to not admit of the slightest doubt.—*Hay There.*

GRAIN ELEVATORS FOR INDIA.

A blue book has been issued, containing the papers relating to the introduction into India of the system of grain elevators in operation in the United States and Canada. The matter was first brought under the notice of the government of India five years ago by Lord Cross, who transmitted for consideration a letter from Mr. James G. Smith of the firm of Messrs. Ritchie, Stewart & Co. of Bombay, relating to the formation of a company for the introduction of grain elevators, and asking for state assistance toward carrying out the project. The government ascertained the views of the various local governments and administrations, chambers of commerce, port trusts, prominent public officers, engineers and railway men regarding the proposal.

The result was embodied in an official minute, in which it was stated that for some years past the wheat sold in England had been very impure, and that both the bulk of the trade and the profits of the growers had been injuriously affected in consequence. Owing to the system of the threshing and storing of wheat in that country and to the practice of sowing wheat mixed with other crops, a certain amount of impurity must always be found in the grain before it leaves the grower's hands, but it was plain from the information gathered that a large portion of the impurities in the wheat which was sold in England was inserted intentionally after the grain had left the threshing floor.

The mercantile community were averse to legislative measures to remedy this, and the government was of opinion that things had not reached the stage at which legislation would be justifiable. There remained the possibility of adopting a medium course by which private enterprise should be subsidized in order to secure the purity of the wheat before it left the country, and in this light Mr. Smith's proposal was discussed. The conclusion finally arrived at was that it was doubtful if the mercantile classes of India were likely to appreciate the advantages of public warehousing; that their instincts were in favor of more confidential methods of dealing, and that there was little chance of securing much support for the scheme at present. On the whole, therefore, the proposal that the state should subsidize a company for the cleaning, grading and storing wheat, or for any one of these purposes, did not commend itself to the government of India.—*Transport, London.*

SCREENINGS.

Corn flew up on wings of fright,
The bears growled out in wild dismay;
But "the bulge" went out in stilly night,
And the bears all frolicked next day.

The rest of the country to Chicago: "Hold our wheat."

It goes against an old man's grain to find his son sowing wild oats, drinking rye, and getting corned.—*Picayune.*

Is it any wonder when a buyer finds all his bales five to ten pounds short, that there comes a baleful look in his eye?

We are anxious to know if the Russian feeding barley will arrive in bulk or in Cos'-sacks.—*Produce Exchange Reporter.*

Dinkle—"This bewildering maze the poets write of, I wonder what it means?" Lusher—"Bewildering maize? Something about corn juice, I suppose."—*Buffalo Courier.*

"Hope lures us on," sings a Western exchange, "toward our fate, which plainly says if we want grain we've surely got to irrigate—three years have passed without a rain."

"Say," said the city youth to the modest countryman, "hayseed out of your hair yet?" "Wal," was the deliberate reply, "I judge not from the way the calves run after me."

Fate laughed a cruel, hard, metallic laugh that must have jarred her gold fillings loose as she sent a rain to Cowley County, Kan., one hour after the rain-maker's contract had expired.

Son of Elevator Man—"Father, I notice that Mr. Jones, who failed last week, was guilty of hypothe-cating grain stored in his house. What does that mean?" Elevator Man—"He put grain up the spout."

Dealer—"Ya, Ya; bud you see, dot seed wheat is bedter because for der germination." Grower—"The German nation be demmed! That thar seed ain't none too good fer a free-born 'n' independent American citizen."

There was heavy speculation at Indianapolis the other day when a Mr. August Rye married a Miss May Wheat. Some people think that dealing in futures is just tolerably bad, but that the pernicious practice of mixing ought to cease.

The Hays City *Sentinel* says that when a Rush county farmer hauls wheat to Hays when within two miles of a home station it makes them indolently wonder whether it is a bank or a machine company which holds the mortgage.

First Friend (of intending groom)—"Well, we'll have to give them a present. What will it be and how much shall we spend?" Second Friend—"I don't know. I'll go as deep as you." First Friend—"Let's send something that will make a big show for our money." Second Friend—"All right. What's the matter with a load of hay?"—*Judge.*

Teacher—"Give a synonym for the word 'reduce.'" Bright Boy—"Equalize."

"Wrong."

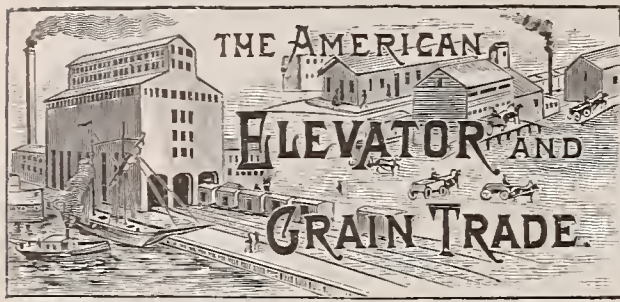
"Well, that's the word the railroads use when they reduce wages."

"Hum! Give a synonym for the word 'increase.'" "Equalize."

"Nonsense!"

"Well, that's the word the railroads use when they increase rates."—*Good News.*

It was apparent that he was from the country, but, for all that, he thought he knew a thing or two of ships and shipping. He stood with two young countrywomen on the Halsted street bridge and interested them muchly with a dissertation on the craft in adjacent docks. A towering grain elevator attracted the attention of one of the damsels. "My!" exclaimed both the girls in one breath, "what is that?" The question was a poser to the young man from the country, but he scratched his head for a moment. Then a light stole over his face, and in an off-hand way he replied: "Oh, that? Why, that's a house-boat. City folks live in 'em all summer." And the girls said, "Oh, yes."



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., OCTOBER 15, 1894.

GIVING PUTS TO FARMERS.

Several country elevator men have been forced to the wall recently by that old practice of receiving grain on deposit which has proved so disastrous to elevator men in the past. As long as the elevator man keeps the grain in his house he is on the safe side, but the minute he sells it he commences to speculate with capital borrowed at an indeterminable rate of interest. Few recognize this fact until a marked bulge in the market brings a horde of greedy farmers for the pay for the stored grain at the top price ruling in the market.

To start with the elevator man who offers to store grain free for farmers until they wish to sell makes a great mistake. He may gain a few patrons by this practice, but he encourages the farmers to speculate and they often do it at his expense. The desire to speculate has always been rife among the farmers, and when they are encouraged to indulge this desire by an elevator man, who offers to keep their grain on the market where they can dispose of it at any time, they cannot resist the temptation to speculate.

As long as only a few farmers indulge in the practice the elevator man is not likely to be swamped by a bulge although he may lose heavily. Every elevator man feels certain of the safety of his position when he commences to store grain free for farmers, and he makes a mental resolution to accept grain from but a few and always to keep it in store until the owner sells it to him. If the resolution was lived up to the number of failures among country elevator men would be reduced and the profits would be more certain.

When an elevator man has stored grain free for one it is a very difficult matter to turn away other applicants, and as the number of storers and the amount of stored grain increase the elevator man finds himself cramped for room,

so he ships out some of the grain. One shipment leads to others and finally he has shipped all the stored grain and must stand ready to pay for it whenever the farmer desires to sell. The practice as indulged in by many of the elevator men amounts to the giving of a put without limit as to day or price; a thing which could not be bought of the wildest trader on the Chicago Board of Trade.

We have not lost sight of the fact that the elevator man gets the use of the money he gets for the wheat for the put he gives the farmer. He gets the 6 or 8 per cent. interest the money would cost him at the bank in exchange for an invaluable put. If elevator men feel that they must store grain for their patrons in order to hold their business then they should provide ample storage room to do so and charge a nominal storage or lease bins to farmers for an annual rent.

THE REVOLUTION IN GRAIN HANDLING FACILITIES.

The success of the new "Iron Elevator" at Toledo and the incorporation of a company to construct steel storage tanks of 1,000,000 bushels' capacity at South Chicago herald in no uncertain tones the revolution which is taking place in the methods of handling and storing grain.

The air-tight steel tanks, which are erected with capacity to suit the wishes of the elevator man, are fireproof, and the plausible claim is made that grain can be stored in these tanks at much less cost than in the old style houses, and without fear of weevil or heating.

The pneumatic system of handling, drying, cooling and cleaning grain has been in use in England for some time, and it would seem certain that its extensive use cannot be delayed long in this country, which has always taken the lead in designing and using improved appliances for facilitating the handling of grain.

AFTER THE SHORT WEIGHT ABUSE.

The North Missouri Millers' Association has inaugurated a move that should bring the blush to the cheek of the grain dealers of the Southwest, and prompt them to rouse up and take a leading part in a fight against an abuse from which they have been suffering many years.

This association of millers, which has a membership of about 75, met at St. Louis recently for the express purpose of investigating and remedying the short weight evil. These millers charge that almost every car of grain shipped to St. Louis elevators falls short by from five to twenty bushels of the weight as ascertained before shipment, and they want relief from the robbers.

Champions of peace and of the terminal elevator men contend with their usual alacrity that the shortages are due to poorly coopered cars, to old weak sided cars, to cars without doors to keep the grain from shifting out, to sneak thieves at division points, and last they claim that all the country scales are rusty and stiff with ice so the shortage occurs only in the imagination of the shipper. This explanation may seem very plausible to all terminal elevator men, but it does not reduce the shipper's loss and hence does not satisfy him.

The chief inspector at St. Louis says: "The law allows a tare of three pounds a thousand for dust, chaff, etc." If he is correct the Missouri law is wrong. Buyers should not be permitted to deduct a definite amount from the quantity of grain received on account of its indefinite quality. The quality should fix the price but not fix the quantity or even have any influence upon it. Buyers should be guided by some definite rule of action which will prevent the habit of docking from growing upon them, lest

it become so strong as to prompt them to dock one-half. If any grain is to be docked for dirt the amount of the dockage upon each car should be fixed by the inspector or some other disinterested person whose judgment will not be biased by his own interests, as is the judgment of the terminal elevator man.

The counter charge that few country elevator men have hopper scales, and most of them load by the line marked in the cars, may be true as to the practice of some, but it does not apply to many of the worst sufferers from this abuse. The elevator man who does not provide reliable scales for weighing his grain must expect to be gonged frequently; in fact one large company, having several terminal elevators, has been charged frequently with having a list showing what country elevator men have not and what ones have facilities for weighing grain, and dock their shipments accordingly. In deference to the interests of their business they should place their elevator on the list of "have scales" and then kick hard when a shortage occurs.

If the grain dealers of the Southwest will organize and join hands with the millers in this fight the chances of a reform being secured will be materially improved.

AMERICAN GRAIN CLEANING MACHINERY ABROAD.

It is gratifying to makers of American grain cleaning machinery, and it must be a pleasure to American elevator men, to know that our grain cleaning machinery abroad stands head and shoulders above anything designed elsewhere; in fact, the only cleaning machines made abroad that are of any value to handlers of large quantities of grain are made after patterns of American machines.

It is a pleasure to inform our readers that the makers of the American cleaning machines which were exhibited at the International Exhibition of Grain Cleaning Machinery in St. Petersburg, Russia, last March, have been awarded a gold medal and certificate, of which the following gives notice:

[No. 731.]

THE IMPERIAL FREE ECONOMIC SOCIETY.
ST. PETERSBURG, 15 30 August, 1894.

RICHMOND MANUFACTURING COMPANY:—The Imperial Free Economic Society begs to hand you herewith a large gold medal and certificate, which was awarded at the International Exhibition of Machinery for cleaning, screening, dressing and drying grain and other seeds, held in March, a. e., for your grain elevator machinery, oat clipper, separator and polisher.

Secretary of the Society, N. KARASSERVITSCH.

WHY ELEVATORS COLLAPSE.

It may puzzle many of our readers to understand why so many country elevators are falling in a heap this fall, but it is not difficult to find the cause. More grain elevators have been erected during the last summer than for several seasons past.

Professional elevator architects and builders have had more business offered than they could accept, so much of the surplus business has fallen into the empty net of country barn builders, who were anxious for a job of any kind. The barn builders know little of the strains to which a grain elevator is subjected, and have not had sufficient practical experience in this line to give effectual consideration to safe economy in building material and to the economy of space and of power.

The wheat is unusually heavy this year, and the fresh crop of new weak elevators is not equal to the demands of the case. One or two old houses have fallen with disastrous results, due no doubt to improper construction or the use of poor, cheap material. Anything which is worth doing at all is worth doing well. We have no respect or sympathy for an elevator

man who will deliberately risk his life and property, as well as the lives of others, by letting the contract for a cheap house to a cheap man. Country houses are loaded so heavily the wonder is that more of them do not fall.

GRAIN TRADE CONGRESS AT NEW ORLEANS.

Our readers will remember that a grain trade congress was held at Wichita, Kan., last spring and that a better understanding of the needs of the trade and the desires of its members was arrived at, without any formal action being taken to divert export grain via gulf ports. Those present became better acquainted with one another and provided for the calling of another congress, so the first was not entirely barren of results.

The next grain trade congress will be held the latter part of next month at New Orleans, and it is expected that steps will be taken which will bring about a commercial alliance between the Crescent City and the Southwest. The New Orleans Board of Trade is working to make the congress a success, and naturally its members are desirous to have Southwestern shippers export their grain via that port. As the export trade grows beyond the capacity of present handling facilities New Orleans merchants will provide new houses and capital for caring for the trade.

PREVENTING AND EXTINGUISHING FIRES IN ELEVATORS.

One dollar invested in apparatus for preventing fires and extinguishing incipient blazes is worth more to any elevator man who is actively engaged in business than \$2 invested in insurance policies, and every elevator man who is sincerely desirous of preventing the destruction of his elevator by fire takes every precaution to prevent fires and provides every practical apparatus for extinguishing them.

Many fires can be prevented if owners will only take precaution, be careful and vigilantly watch every place a fire is likely to occur, and examine frequently apparatus provided for the extinguishment of fires in their incipency.

A carefully compiled report which appeared in the July number of the AMERICAN ELEVATOR AND GRAIN TRADE shows that 25 per cent. of the fires occurring in elevators during 1893 were caused by locomotive sparks. If every country elevator had a tin roof and iron siding and its windows were kept closed except on the side away from the railroad track many of the fires due to this cause would be prevented. A further reduction in the percentage of fires originating from this cause could be made by beveling the upper surfaces of all projecting window sills and other woodwork, so that sparks could not lodge. It is not often that fires are caused by sparks lodging in such places, but they have occurred and may occur again.

Spontaneous combustion also contributes largely to the causes of elevator fires. This is due to the carelessness of elevator owners in permitting corn silks, dirt, refuse and grease to accumulate in out-of-way places, and to the slack-coal pile, which has been such a prolific source of elevator fires. Refuse should not be permitted to collect about an elevator; it not only increases the fire risk, but also provides a veritable paradise for weevil and other insects. If you must have slack coal about, keep it in a separate building, and have a good fire wall between it and the main building.

Friction is another cause which contributes largely to elevator fires. All bearings are likely to get hot, even if given considerable attention, and the bearings of elevator heads and of corn shellers are noted for their weakness in this line. Clippers and cleaners are not free from blame. If the boxes of all bearings were kept in good condition and well supplied with an oil of the

proper viscosity, the fires due to friction would be considerably below the 17 per cent. of 1893. When the elevator is run continuously every bearing should be examined morning, noon and night, and kept in easy running condition.

Corn shellers are forbidden machines by many insurance companies, but as they are generally operated away from the elevator and as near to the cribs as possible, this does not occasion many elevator owners much trouble. A fire insurance inspector, who is always given to extremes in his company's favor, says: "Some corn shellers are dangerous sources of fire, even though at rest and under water." We heard recently of an inspector who would not renew a policy upon a feed mill until an old out-of-date and unused sheller had been removed from the building. There are several shellers on the market which will not occasion any trouble if carefully attended, yet it is evidently safer and cheaper to have them without the building.

Defective flues and furnaces are also credited with causing elevator fires. Their credits are small as compared with the others mentioned in the foregoing, but they are not undeserving of attention.

Elevator owners can reduce the loss by fire by providing means to extinguish fires as well as by striving to prevent them. Automatic sprinklers, if well constructed and properly taken care of, are reliable guards against fire loss. Standpipes and hose, chemical squirters and hand grenades are very good, but in time of a fire their use is confusing to the average elevator employee. Barrels of salt water with buckets hanging by are credited with more extinguishments of incipient blazes than any other apparatus designed for this purpose. The most excitable man will use a bucket of water effectively, because there never was a doubt in his mind as to how it should be used in time of fire. A number of barrels filled with salt water should be kept in convenient places about every elevator, and each barrel should be kept full. We recently heard of an elevator man who had barrels filled with salt water and supported above each elevator head in such a way that when a fire occurred in the elevator head it would burn the barrel's supports and cast the water upon the elevator head.

Means for preventing fires merit the elevator owner's attention first, but he should not forget that a little dose of extinguisher in the early stages of a fire will often prevent a loss of property as well as the loss of business which always follows the temporary suspension.

PREPARING TO STRIKE ANOTHER BLOW AT THE TRUST.

The elevator combine at Buffalo has only recently gained control of the six floating and the two standard elevators at that port, which all spring and summer caused it so much trouble. In spite of the law of New York which provides that the charge for transferring grain shall not exceed five-eighths of a cent per bushel the trust has been charging seven-eighths of a cent.

This year the elevators outside the pool gave the combine houses such a hard fight for business that grain was transferred free for several weeks, and the pool was threatened with disruption. This convinced the pool managers that it would be impossible to drive the outside transferers out of business, so they bought them out, and the charge for transferring was immediately advanced to the old figure—seven-eighths of a cent per bushel.

This fight was the longest and hardest the pool ever had, and was instrumental in turning a greater percentage of the grain down the Erie Canal than it has received for a number of seasons. The fact that canal freights declined and the rail carriers commenced to get their old share of the through grain traffic, as soon as the combine regained control, opened the eyes of the Erie Canal boatmen to a remedy

for one cause that has always worked injury to their business. It is that floating transfer elevators shall be constructed and operated by canal boat owners. When they have a sufficient number of transfer elevators to avoid delay of vessels they will be on an equal footing with the rail carriers as to terminal handling facilities.

We frequently suggested this remedy when the agitation for state elevators was being waged, and we are pleased to know that the canal boatmen are now organizing a stock company to construct two floating transfer elevators in time to handle grain at the opening of navigation next spring. Every precaution will be taken to prevent the pool gaining control of the elevators. No stockholder will be allowed more than five shares and he can sell his stock only to the company.

The grain shippers of the West are sincerely anxious for the success of the boatmen, for it means lower rates to the seaboard and relief from the extortionate charges of the elevator-railroad pool at Buffalo.

PULL THE STRING.

The AMERICAN ELEVATOR AND GRAIN TRADE is wrapped with the Williams wrapper. This is a big little invention that deserves credit for removing one of the common annoyances of life. You have trouble in getting magazines and periodicals out of their wrappers, do you not? It is quite a job, and is not always successful, even with a penknife, without cutting the pages more or less.

If you will look at the wrapper that incloses this issue you will find a crease showing the presence of a string. The wrapper is notched at each end of the string. Pull one end of the string and the wrapper is torn off. No penknife, no cutting, no trouble, no profanity.

SELLING ON TRACK AND CONSIGNING.

A new phase of the track buyers' business has been presented to the trade by the failure of a firm in the Northwest, which did a large business in buying grain on track and shipping to central markets. A number of country dealers who sold grain to this firm did not get paid for their grain and now have the same chance as other creditors to get their money.

The *Market Record* says: "There is no surprise that traveling track buyers lose money, nor that they sometimes fail to pay for the grain forwarded to them. The business they do seems to be done on a margin so narrow as to make it unsafe for anyone concerned in it."

When consigning grain to a reliable commission house the shipper does not run much of a chance of losing all he has invested in the grain, for he usually makes a draft against the grain for at least 50 per cent. Some of the states have laws protecting the shipper's consignment from the consignee's creditors. It is not often that shippers lose anything by the failure of commission men.

THE TORONTO WATERWAYS CONVENTION.

The International Deep Waterways Convention at Toronto last month was well attended and well managed. Many excellent speeches were made and the convention adopted resolutions in which it declared for a 21-foot channel connecting the great lakes and the high seas. It recognized the utility of the natural route to the sea by the St. Lawrence River, and declared a canal from the lakes to the Hudson River a commercial necessity. If New York does not soon arouse its apathists, the St. Lawrence route will get so strong a hold on the export grain trade of the country that it will be impossible to turn it again into the old channels via New York harbor.

EDITORIAL MENTION

SEND us news items from your district of interest to the grain trade.

THE man-with-a-scoop who carries his office in his hat should be taxed out of existence.

THE feed grinding business is better than ever, and many elevators are being equipped with feed grinding plants.

THE grain trade merits and its members should demand that a clean bill of lading should be given for every pound of grain shipped.

LOST—the confidence we once had in the government crop reports. Finder will please return and receive a bountiful reward from a suffering trade.

By next spring Montreal will have better facilities for transferring grain, and it is expected that there will be a great increase in the amount of export grain passing via that port.

THE council of every town that desires to build up a good all the year around grain trade should levy a license upon the irregular dealer; make him contribute to the expense of government.

OHIO and Indiana are neck and neck for first place in this year's race for the best average yield per acre pennant. Each is credited with producing an average of 19.4 bushels of wheat to the acre.

COUNTRY elevator men claim that shortages never occur when they ship to distilleries and are never large when the shipment goes direct to a mill. Terminal elevator men should paste this on their scale beam.

IF any of our readers know how far is bottom and when wheat prices will reach it, we will consider it a great favor if he will make use of our columns to send relief to a long suffering trade that is nearly overcome by the long suspense.

THE National Transportation Association would relieve a large suspense that shadows the grain trade by informing the public where it is at. We have waited so long for that uniform bill of lading that we had almost forgotten what we were waiting for.

THAT Russian barley has not arrived from Odessa yet, but when it does a Milwaukee brewer will make a barrel of beer of it, and place it on exhibition as an awful example of one of the results of our farmers indulging their mania for raising wheat and corn.

IF country grain dealers doing business along any division of railroad would congregate each month and compare notes they would discover many ways in which they could help one another without detriment to any. A closer acquaintance alone would be of value to them.

THE man who makes a specialty of soliciting consignments direct from farmers is very lonesome these days. Very few farmers in the West are willing to spare a carload of wheat and they have no corn to spare. The regular dealers would eat their grain before they would

consign it to one who competes with them in their home market, so the selfish commission man who is posing as the farmers' friend has much leisure time in which to nurse his ailing fad.

AT LAST the Tehuantepec Railway, which runs from Coatzacoalcos on the Gulf of Mexico to Salina Cruz on the Pacific Coast, has been completed, and as soon as the harbors and the terminals have been improved a new route for grain from the Pacific Coast and from Australia will be opened to Europe.

THE Interior Department has not disclosed the name of the lowest bidder to supply 60-pound No. 1 spring wheat to the Crow Creek Agency, South Dakota, but the bid was the startling low figure of \$1.01 per bushel. The farmer who made the bid may be surprised to learn that his wheat at \$1.01 will not be accepted.

THE government crop report places the production of wheat this year at 440,000,000 bushels, or nearly 60,000,000 bushels below the generally accepted estimate of the crop. The agricultural department should be willing to meet the extravagants, at least half way; agree to call it 470,000,000 bushels and declare all disputes off.

THE enthusiasts who have been making extravagant statements regarding the amount of wheat being fed to stock are suspected of suffering from chronic exaggeration brought on by a wild desire to see a material advance in the price of wheat. If all the reports of wheat feeding were true we would be importing wheat before spring.

THE Grain Receivers' Association of Minneapolis has held several meetings recently, and are at least trying to do something in the interest of the trade. The freight rates on grain coming to that city over the Great Northern has recently received their attention. We trust that the association will strive persistently to have the rates reduced, for they are exorbitant.

THE queer condition of the grain markets which has ruled for some time has made business decidedly discouraging for the average mixer. The low grades of wheat have been so eagerly sought by feeders that in some markets they bring almost as much as contract wheat. Oats, rye, barley and wheat are so near the same price per pound that there is little profit in mixing. Even screenings command a fair price.

ALTHOUGH S. H. Stevens, the Flaxseed Inspector of the Chicago Board of Trade, does not officially recognize any difference between flaxseed grown in the Southwest and that grown in the Northwest, the flaxseed trade has discovered a material difference, and we have a Southwest No. 1 and a Northwest No. 1. The seed from the Southwest contains more cake and less oil than that from the Northwest, and therefore does not bring as much by 1 to 4 cents a bushel as that from the Northwest.

SOME months ago a number of the members of the old Chicago Grain Receivers' Association organized a new association, and started out by resolving to do everything in their power to advance the interests of the trade. The association has not been heard from since, and the opinion is gaining supporters that it has gone to seek McGinty. Complaints are continually being made against the Chicago market on account of short weights and docking, and yet no effort is being made to have the loaded cars well guarded when standing in the yards. Much grain is weighed on unreliable track scales and

transferred by hand from car to car. First-class transfer elevators with reliable hopper scales of large capacity, and facilities for transferring grain rapidly without waste, are needed.

CHARGES for freight in excess of the quantity named in the bill of lading has long been a bone of contention between lake shippers and lake carriers. The question has been taken into the courts finally and test case may be made. The vessel owner refused to give up all of the cargo until the freight for the amount in excess of the bill of lading had been paid, the shipper libeled the vessel for \$1,000, and the dispute will be settled in the courts.

THE daily press sensation manufacturers have revived, once more, a report of a fact which has been history these many years. "The Department of Agriculture is watching with great interest the results of experiments with Indian corn in the making of beer." There are over fifty corn mills in this country whose special work is the preparation of white corn grits for brewers. The making of beer from corn is old and was proved a success long ago. Some foreign brewers have commenced to use corn grits, and the trade gives promise of a continued increase in the demand not only at home, but also abroad.

UNTIL this season Duluth and Superior have not figured as large factors in any part of the grain trade except the wheat trade. This season, however, brings a change, and large quantities of flaxseed and barley are being received. The head of the lake cities have ample elevator facilities for present needs and have enterprising merchants to provide better facilities as the trade grows. The cultivation of untilled lands in the Northwest which will follow diversification in grain growing and the utilization of these ports for the shipment of Manitoba grain is certain to bring about the doubling and the tripling of the grain trade at that point.

THE Grain Receivers' Association at Minneapolis has been so successful in reducing the amount of grain stolen from cars by sneak thieves that Duluth and Superior have taken a step in the same direction. Notices have been posted forbidding any party, with the exception of the state weighers, employees of the railway companies and representatives of the Superior and Duluth boards of trade from breaking the seals on cars of wheat, while said cars are in possession of the railway companies. This privilege should be denied to all except the inspectors, and then a railroad employe should be present to reseal the cars. Samples should be taken by the inspector or by regular authorized samplers at the same time the grain is inspected. When the car gets to the elevator the seal should be broken by a regular employe competent to detect and report any irregularity in the condition of the seals or of the car.

ACCORDING to the report of the Bureau of Statistics breadstuffs to the value of \$8,646,507 were exported during September, against an amount valued at \$18,152,886 in September, 1893, the exports for the three months ending September 30 being valued at \$27,629,310; and for the nine months ending September 30 breadstuffs valued at \$93,988,095 were exported, against an amount valued at \$147,513,988 in the same time of 1893. In September 6,309,205 bushels of wheat, valued at \$3,584,281, against 11,129,082 bushels, valued at \$7,826,796, in September, 1893, were exported, 20,403,794 bushels, valued at \$11,970,721, being exported during the three months ending September 30; and for the nine months ending September 30 51,217,377 bushels, valued at \$31,374,765, against 88,997,757 bushels, valued at \$66,757,762, in the same time in 1893, were exported.

During the nine months ending September 30 36,479,269 bushels of corn, 419,489 of oats, 1,765,187 of barley and 232 of rye were exported, against 41,365,369 bushels of corn, 6,127,036 of oats, 4,412,916 of barley and 751,791 of rye exported in the same time of 1893.

GRAIN elevators which are built abroad by foreign engineers are very different from the elevators built in this country as is shown by the substantial structures erected at Novorossisk, Russia, at a great expense. In this country with high priced labor we build large elevators at a cost of 8 to 10 cents a bushel, while the 1,800,000-bushel elevator, illustrated in this number, cost .3055 cents per bushel capacity. Its massive stone foundation and heavy brick walls are fireproof and permanent. The bins are hexagonal, which seems to be the coming shape for grain bins. If anyone would erect so expensive a plant in this country they would be looked upon as stark mad.

A CASE of interest to grain receivers as well as to shippers was recently decided at Minneapolis in favor of the receiver. A car of wheat belonging to Woodward & Co. had been sold and properly ordered, but was refused at the elevator by the purchaser for some cause. The Northern Pacific Railroad Company claimed they notified Woodward & Co. that the car was standing on track subject to trackage charges, by telephone; the firm, however, claimed no notice whatever was received at their office, and as quite a sum was involved in "demurrage charges" before they found out about it, they sued the agent personally and secured a favorable verdict.

THE farmers generally work backward when they undertake anything outside of the farming business, but they have adopted a plan for reducing freight rates on wheat that could be utilized effectively by grain dealers to secure many reforms. Out in Walla Walla county, Washington, they have organized to fight the railroad companies' wheat rates before the Interstate Commerce Commission, and for this purpose a fund is being raised by one dollar subscriptions. The trouble with many of our grain dealers is that they think their duty is done when they have attended a meeting. They forget that it requires money to have work done.

THE difference in the price of the various qualities of hay on the Chicago market recently has been as great as \$6, the range being from \$5 to \$11 on the same day. This is ample evidence that Chicago retailers are discriminative buyers. When country shippers learn to discriminate as closely against the bad hay and learn the wants of the Chicago market we may expect the large receipts of poor hay to be discontinued. It will pay elevator men to study the grades and wants of any hay market. We feel certain that they can direct shipments of hay more judiciously and with greater profit to the farmer than many of the farmers are now doing. A number have attempted it in recent years with success and a small profit to themselves.

HERE is another case of asking the elevator man to pay a chattel mortgage on growing grain. A certain Abigail Mullin of Big Stone county Minnesota, sold a farm to P. E. Hayden, taking as part pay a lien on the farm and a chattel mortgage on the crops. Mr. Hayden sold 1,627 bushels of wheat to the Northwestern Elevator Company, and now Abigail sues the company for the return of the wheat or pay for it. The selling of mortgaged grain to unsuspecting grain dealers is generally practised by tenants who have no attachable property, so a suit for damages will avail the elevator man nothing. Our lawmakers should provide for the punishment of the sellers of mortgaged grain, and make the punishment so severe as to stop it.

Trade Notes.

A man may guy,
And a man may lie,
And a man may puff and blow;
But he can't get trade
By sitting in the shade,
Waiting for business to grow.

Good advertising is the seed from which business always harvests a profitable crop.

James R. Young will represent The Edw. P. Allis Company in the Southwest, and has established headquarters at Kansas City.

The Automatic Grain Separator Company of Lockport, Ill., has certified to a dissolution of organization and surrendered its charter.

The Webster Manufacturing Company has been running its shops day and night for the two last months and reports that the demand for gas engines and elevator supplies has been unusually large.

Sawyer—How do you suppose Knowsall amuses himself at his store since he gave up advertising? Seener—I give it up. How? Sawyer—By picking the flies from the fly paper and using the paper over again.—*South Boston News.*

The Prinz & Rau Manufacturing Company of Milwaukee, Wis., desires to inform the trade that H. E. Richardson, who has been in their employ for the past three months, is no longer connected with the firm. Mr. Richardson has no authority to contract bills for the firm or make collections or transact any business on its account, and no drafts made by him will be honored.

The aim of every business man should be to use every opportunity of reaching every possible customer. Newspaper advertising is the instrument most likely to accomplish this end. Other means have been tried and have failed. For a time, circulars were considered to be as good a means of accomplishing success as could be devised; but those have been overdone and are not now read. Circulars almost invariably find their way, often with unbroken wrapper, into the waste basket or the fire.

The Witte Iron Works Company of Kansas City writes us: "The return for our advertisement in your valuable paper is bringing us an extraordinary number of customers. Some years ago, while we were yet manufacturing our old style engines, we received a great many inquiries, and being new in the business did not know the full value of them; but now that we have a successful and durable and reliable engine we begin to appreciate them. Every day we receive letters from millers and grain men who bought our engines through our advertisement in the AMERICAN ELEVATOR AND GRAIN TRADE, and to say they are satisfied is putting it mild."

THE GRAIN BUSINESS AT NEW ORLEANS.

A meeting of grain shippers, ship agents and railroad men was held recently at the board room in the Cotton Exchange to consider the present depression in the grain export business at New Orleans. Mr. M. J. Sanders was called to the chair, and the question was fully and fairly discussed. A committee was appointed to look up the matter of railroad rates in order to find out why business has been leaving the port. This was the only action taken, and the meeting then adjourned.

Mr. W. J. Orthwein of the firm of Charles F. Orthwein & Son, was seen after the meeting, and he stated that while the grain exporting business begins at that port during the middle of July, not a carload of Kansas City grain has been loaded there as yet.

Up to this time, in the season last year, that port had handled three-quarters of a million bushels of grain from Kansas City, while not a single carload had been shipped there this year. The Southport Elevator has not handled any grain for four months, while the Westwego Elevator has not touched a pound

outside of the Texas and Oklahoma grain. This latter is the only stuff that has passed through there. Usually it is not regularly considered, the supply for the port coming from the Western country. A few hundred thousand bushels of the Texas and Oklahoma article have been handled by the Westwego Elevator, but outside of that nothing has gone through. Practically speaking, the grain export business is at a standstill there.

When asked if there was any chance for an improvement in the status of affairs, Mr. Orthwein stated that grain is accumulating at Kansas City, and if the railroads will put on reasonably lower rates, putting that port in position to compete with New York, the grain exporters could still hope to handle the business. The trouble is attributable to both the financial depression and to the fact that the Northern roads seem to place the grain in New York as cheaply as they do in New Orleans. As long as that is done it will be hard to handle the trade there.

THE FOUNDATION FOR A FORTUNE.

"Oh, if I only had a little corn," he exclaimed, as he put aside the paper and sat down to breakfast.

"What would you have done with it, dear?" she asked affectionately, as she poured out his coffee.

"Done with it?" he cried. "What do you suppose I would have done with it? Eaten it?"

"I didn't know, dear. I thought——"

"Of course you didn't know!" he interrupted irritably. "I suppose you think I want it to take out to the stock yards and feed to the hogs! But I don't. I want it to sell! Do you understand that? To sell!"

"Is there much of a market for corn now?" she asked innocently.

"Market!" he cried. "Is there a market! See here, Mrs. Dobbins, if I had had a little corn—just a little, mind you!—I'd have made my everlasting fortune yesterday. It's gold, I tell you, pure gold now to those who have it. You can't touch the price with a forty-foot pole."

"Oh, the price has gone up!" she exclaimed, under standingly.

"It's gone clear out of sight."

"And if you had some to sell now——"

"If I had some to sell now I could send you to Europe."

"I think I understand," she said quietly, and the matter was dropped until he was leaving for the office. Then she appeared with a big bundle in her arms.

"I've got a surprise for you," she said with a glad smile.

"Looks like a cord of wood," he said suspiciously.

"It isn't," she replied. "It's some corn for you to sell on your way to the office. I got it for dinner, you know, but——"

The door had slammed and he was gone. He said nothing. He knew he could not do his feelings justice.

"Maybe it wasn't enough," she mused as she watched him from the window. "But he said he only needed a little."

Farmers in the Palouse district in Washington are said to be swamped with wheat which they cannot ship. As the grain is rotting in their bins they are anxious to get hogs to feed, but this the excessive freight rates make impossible.

It is reported that two vessels were chartered at Oswego for grain to New York by the way of the Oswego and Erie Canal. The rates were 2½ cents for lake freights, 1 cent over Buffalo rates, and a half and three-fourths less on the canal.

Milwaukee grain dealers seem to think that Russian barley is liable to be an important factor in making the price of the American product in the future. The Russian barley is heavy and stained and is said to be similar to Iowa barley of last year.

Texas, for one, has a surplus corn crop and the farmers are discussing whether to sell it, feed it or hold it for better prices. Holding means money tied up and interest lost, not to mention incidental expenses and possible depreciation, and is a two-in-the-bush speculation at best.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since September 15 has been as follows:

September.	NO. 2 RED W. WHT.		NO. 2 SPG WHEAT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 3 BARLEY.		NO. 1 FLAXSEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	139	139 1/2
16...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	142	142 1/2
17...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
18...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
19...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
20...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
21...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
22...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
23...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
24...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
25...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
26...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
27...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
28...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
29...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
30...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
1...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
2...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
3...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
4...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
5...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
6...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
7...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
8...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
9...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
10...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
11...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
12...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
13...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
14...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
15...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2
16...	53 1/4	53 3/4	53	54 1/4	54 1/4	54 1/4	30 1/4	30 3/4	47 1/4	47 1/4	53	53	141	141 1/2

For the week ending September 15 Prime Contract timothy sold at \$5.37 1/2 @ 5.50 per cental; Prime Contract clover at \$8.60 @ 8.65; Hungarian at \$0.90 @ 1.25; German millet at \$0.60 @ 0.90; buckwheat at \$1.10 @ 1.30 per 100 pounds. Receipts of hay for the week were 4,411 tons, against 7,390 tons the previous week; shipments were 663 tons, against 887 tons for the previous week. Offerings of timothy hay were rather small during the week. A very fair inquiry existed for Choice hay. Sales of No. 1 timothy ranged at \$10.00 @ 12.00; outside very fancy. No. 2, \$9.50; Illinois Upland Prairie, \$5.75 @ 8.00; Indiana, \$5.00 @ 8.00; Kansas, \$5.00 @ 11.25 for poor to fancy; Iowa, \$1.25 @ 11.00 for poor to fancy; bedding hay, \$5.50. Wheat straw sold at \$4.00 @ 4.50; oat straw at \$4.50, and rye straw at \$5.00 @ 6.00.

For the week ending September 22 Prime Contract timothy sold at \$5.50 @ 5.55 per cental; Prime Contract clover seed at \$8.60 @ 8.75; Hungarian at \$0.90 @ 1.25; German millet at \$0.60 @ 0.90; and buckwheat at \$1.10 @ 1.50 per 100 pounds. The receipts of hay for the week were 4,034 tons; shipments 423 tons. During the early part of the week the market for timothy hay ruled firm. The offerings were rather small, and the demand was good. Later the demand became light, the market ruled dull, and prices declined 50 cents per ton. Sales of No. 1 timothy ranged at \$11.00 @ 11.50; good to choice, and \$11.75 @ 12.00 for fancy. No. 2 \$10.00 @ 10.50; mixed, \$8.00 @ 9.00; Illinois Upland Prairie, \$7.00 @ 8.50; Indiana, \$5.00 for heating and \$6.00 @ 8.00 for fair to choice; Kansas, \$5.00 @ 6.00 for poor, and \$7.00 @ 11.50 for fair to fancy; Iowa \$5.00 @ 7.00 for poor, and \$8.00 @ 11.00 for fair to fancy. No. 1 prairie, \$7.50. Wheat straw sold at \$4.00; oat straw at \$4.50, and rye straw \$6.00.

For the week ending September 29 Prime Contract timothy sold at \$5.45 @ 5.60 per cental; Prime Contract clover seed at \$8.70 @ 8.75; Hungarian at \$0.90 @ 2.00; German millet at \$0.60 @ 1.25; buckwheat at \$1.25 @ 1.50 per 100 pounds. The receipts of hay for the week were 5,605 tons; shipments 368 tons. The market for timothy hay ruled very dull. Arrivals were large and quality only fair; considerable poor, coarse and heating hay received. Only a moderate inquiry; prices declined 50 cents. Sales of No. 1 timothy ranged at \$10.00 @ 10.50 for fair to choice, and \$11.00 @ 11.50 for fancy. No. 2, \$9.00 @ 10.50; mixed, \$6.25 @ 9.00; Illinois Upland Prairie, \$5.00 @ 8.00; Indiana, \$5.00 @ 8.50; Kansas, \$5.00 @ 7.00 for poor, and \$9.50 @ 10.50 for good to choice; Iowa, \$5.00 @ 8.50 for poor to fair, and \$9.00 @ 11.00 for good to fancy; packing hay, \$4.50. Wheat straw sold at \$4.25; oat straw at \$4.50, and rye straw at \$5.00 @ 6.25.

For the week ending October 6 Prime Contract timothy sold at \$5.30 @ 5.52 1/2; Prime Contract clover seed at \$8.50 @ 8.65; Hungarian at \$1.00 @ 1.25; German millet at \$0.75 @ 1.25; and buckwheat at \$1.25 @ 1.50 per 100 pounds. The receipts of hay for the week were 7,261 tons; shipments 495 tons. For strictly choice timothy and Upland Prairie there was a good demand. The market was overstocked with poor hay and the week closed with a large number of cars unsold. Sales of No. 1 timothy ranged at \$10.00 @ 10.25 for good, and \$10.50 @ 11.00 for choice to fancy. No. 2, \$9.00 @ 9.50; mixed, \$8.00 @ 8.50; Illinois \$5.25 @ 8.50 for fair to fancy; Indiana, \$4.00 @ 9.00 for poor to fancy; Kansas, \$7.00 @ 9.00 for fair to good, and \$12.00 for very fancy; Minnesota, \$7.50 @ 8.50; Wisconsin, \$7.00; Iowa, \$6.00 for poor, \$7.00 @ 10.25 for fair to choice, and \$10.50 @ 11.00 for fancy. No. 1 prairie, \$6.00; packing hay, \$4.50 @ 5.00; bedding hay \$5.50. Oat straw sold at \$3.50 @ 4.25, and rye straw

at \$2.00 for damaged, and \$5.00 @ 6.25 for good to choice.

For the week ending October 13 Prime Contract timothy sold at \$5.30 @ 5.35 per cental, Prime Contract clover seed at \$8.50 @ 8.60, Hungarian at \$1.00 @ 1.50 German millet at \$0.75 @ 1.25 and buckwheat at \$1.30 @ 1.40 per 100 pounds. The receipts of hay for the week were 4,908 tons; shipments, 489 tons. Only a moderate business was transacted in this market during the past week. Choice timothy and Upland Prairie met with a fair inquiry and prices ruled very steady. Sales of No. 1 timothy ranged at \$10.00 @ 11.00 for fair to choice and \$11.25 @ 11.50 for fancy; No. 2, \$9.00 @ 9.50; Mixed, \$7.50 @ 8.50; Illinois Upland Prairie, \$4.50 @ 8.00 for poor to choice; Indiana, \$6.00 @ 9.00 for fair to fancy; Kansas, \$6.00 @ 11.00; Iowa, \$6.00 for poor and \$7.50 @ 11.00 for fancy; No. 1 prairie, \$7.50; packing hay, \$4.50 @ 5.00. Wheat straw sold at \$3.50 @ 4.50; oat straw at \$3.50 @ 4.00 and rye straw at \$4.00 @ 6.25.

RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the 4 weeks ending September 29, as compared with the same period of the preceding year, were, according to Geo. M. Lane, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	605,273	1,182,012	384,427	922,267
Corn, bushels.....	99,511	141,274	6,12	12,987
Oats, bushels.....	224,346	194,118	122,125	44,436
Barley, bushels.....	75,623	1,350		
Rye, bushels.....	7,625	10,357	25,794	9,525
Hay, tons.....	990		70	
Flour, barrels.....	13,455	14,005	10,210	12,600

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the 4 weeks ending Sept. 29, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels...	4,907,291	5,109,949	4,497,859	3,328,041
Corn, bushels.....				
Oats, bushels.....	52,261		13,117	
Barley, bushels...	460,346	27,261	72,741	12,421
Rye, bushels.....	4,337	2,578		
Flaxseed, bushels...	247,719	34,440	120,569	
Flour, barrels.....	617,438	803,322		
Output, produced				
Duluth.....	106,819		659,758	753,325
Superior.....	261,014		258,046	95,120

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the 4 weeks ending Sept. 29, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	762,624	1,017,750	69,500	243,341
Corn, bushels.....	159,250	63,050	36,607	1,300
Oats, bushels.....	672,000	650,000	595,732	448,800
Barley, bushels.....	2,627,526	607,100	1,754,986	311,695
Rye, bushels.....	86,335	57,600	29,700	60,400
Grass seed, pounds...	725,250	133,350	155,603	260,104
Flaxseed, bushels...	100,908	89,322	9,781	
Broom corn, lbs.....				
Hay, tons.....	698	1,158	36	352
Flour, barrels.....	242,329	91,235	333,411	209,083

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the 4 weeks ending September 29, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	1,916,100	1,958,300	1,469,100	1,649,100
Corn, bushels.....	49,000	511,500	24,500	407,900
Oats, bushels.....	88,900	47,100	55,400	45,000
Barley, bushels.....	1,200		1,600	
Rye, bushels.....	40,900	43,600	61,900	23,100
Clover seed, pounds...	2,956,500	5,531,025	337,950	2,442,600
Flour, barrels.....	6,075	10,595	95,981	132,193

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the 4 weeks ending Sept. 29, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	95,700	117,400	35,400	88,200
Corn, bushels.....	673,250	616,750	76,700	194,400
Oats, bushels.....	633,600	1,891,800	769,900	1,621,900
Barley, bushels.....	177,200	31,500	148,400	14,400
Rye, bushels.....	6,600	600	6,600	600
Mill Feed, tons.....	585	2,275	4,544	4,394
Seeds, lbs.....	442,580	140,000	120,000	60,000
Broom Corn, lbs.....	195,000	none	217,000	none
Hay, tons.....	1,970	3,460	465	998
Flour, barrels.....	21,000	51,800	22,000	46,700
Spirits & Liquors, bbls.	1,447	645	10,930	19,660
Syrup & Glucose, bbls.	1,950	1,465	39,300	23,160

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the 4 weeks ending September 29, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	8,591,550	5,736,910	654,980	892,050
Corn, bushels.....	66,420	158,410	4,370	60,990
Oats, bushels.....	338,010	352,440	188,670	139,290
Barley, bushels.....	142,300	368,950	114,840	141,580
Rye, bushels.....	55,970	13,880	8,240	7,380
Flaxseed, bushels....	126,260	204,790	18,500	126,720
Hay, tons.....	1,609	2,538	40	97
Flour, barrels.....	7,263	15,808	837,350	739,629

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Oct. 13, 1894, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.....		20,000	175,000		75,000
Baltimore.....	1,219,000	24,000	22,000	18,000	
Boston.....	603,000	11,000	395,000	9,000	
Buffalo.....	2,230,000	270,000	124,000	16,000	855,000
do afloat.....					
Chicago.....	25,349,000	1,674,000	1,421,000	169,000	45,000
do afloat.....					
Cincinnati.....	22,000	16,000	201,000	9,000	158,000
Detroit.....	1,603,000	16,000	37,000	1,000	51,000
do afloat.....					
Duluth.....	3,315,000		106,000	21,000	418,000
do afloat.....					
Indianapolis.....	343,000	20,000	46,000		
Kansas City.....	1,523,000	15,000	272,000	1,000	
Milwaukee.....	708,000		72,000	11,000	169,000
do afloat.....					
Minneapolis.....	9,166,000	3,000	253,000	38,000	42,000
Montreal.....	721,000	1,000	61,000	2,000	2,000
New York.....	12,638,000	273,000	3,050,000	17,000	1,000
do afloat.....	575,000	26,000	203,000		39,000
Oswego.....	30,000	5,100			225,000
Peoria.....	219,000	15,000	348,000		
Philadelphia.....	1,280,000	23,000	205,000		
St. Louis.....	6,394,000	44,000	529,000	7,000	3,000
do afloat.....	39,000		40,000		
Toledo.....	3,436,000	24,000	310,000	22,000	1,000
do afloat.....					
Toronto.....	61,000		16,000		49,000
On Canals.....	1,819,000	453,000	584,000	10,000	565,000
On Lakes.....	1,688,000	291,000	404,000	31,000	318,000
On Miss. River.....					
Total.....	75,074,000	3,379,000	9,081,000	385,000	3,016,000
Corresponding date, 1893.....	65,239,000	9,010,000	5,189,000	506,000	2,032,000

*Estimated from the best data available in advance of official figures.

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of September, 1894, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No Grade.
	2	3	4	1	2	3	1	2	3	
C., B. & Q.....				5	1	2	226	31	3	5
C., R. I. & P.....				161	36		13	55	7	
C. & A.....	5			46	57		348	121	26	5
Illinois Central.....	2	2		44	28		528	348	18	20
Freeport Div.....										
Galena Div. N. W.....										
Wis. Div. N. W.....							2			
Wabash.....	1	4		7	4		235	191	13	5
C. & E. I.....	2	1		1			337	151	14	9
C., M. & St. P.....							3	1		
Wis. Cent.....										
Gr. Western.....				11	58		4	8	1	
A., T. & S. Fe.....		1		44	76		46	66	23	4
Through & Spec.....	2	3		1	1		1332	158	14	3
Total each grade.....	7	16		320	261	2	3074	1130	119	51
Total W. wheat.....										4981

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C., B. & Q.....	656	23	93	1	1,130	51	17	1
C., R. I. & P.....	245	13	32	6	327	73	2	
C. & A.....	339	51	102	16	450	53	12	
Illinois Cent.....	1,276	79	365	31	498	66	54	1
Freeport Div.....	85	2	7		66		1	
Gal. Div. N. W.....	75	7	4	1	101	29	6	
Wis. Div. N. W.....	1	3			1			
Wabash.....	391	41	120	16	143	30	8	1
C. & E. I.....	73	19	48	13	143	29	8	
C., M. & St. P.....	21	9		2	33	9	1	
Wis. Cent.....								
C. G. Western.....	12				17	3	2	
A., T. & S. Fe.....	250	51	21	7	345	49	2	
Thrh'g & Spec.....	176	10	19	2	41	18	13	
Total each grade.....	3,600	308	811	95	3,294	411	126	10
Total corn.....								8,655

OATS.

Railroad.	White.			2	3	White Clipped.		No Grade.
	1	2	3			1	2	
C., B. & Q.....	461	124	135	25				10
C., R. I. & P.....	183	145	53	53				16
C. & A.....	112	22	111	27				5
Illinois Central.....	187	275	309	40				18
Freeport Div.....	77	35	18	6				1
Galena Div. N. W.....	186	165	87	29				1
Wis. Div. N. W.....	73	17						1
Wabash.....	181	35	142	19				4
C. & E. I.....	155	190	304	21				10
C., M. & St. P.....	215	61	56	11				1
Wisconsin Central.....	1	1	1					1
C. G. Western.....	77	52	37	19				1
A., T. & S. Fe.....	122	73	61	1				
Through & Special.....	101	103	127	10				8
Total each grade.....	2,131	1,208	1,441	261				75
Total oats.....								5,120

SPRING WHEAT.

Railroad.	Colorado.	2	3	4	No Grade.	White.		Mixed Wheat.	
						1	2	2	3
C., B. & Q.....		6	2	3					
C., R. I. & P.....			2						
C. & A.....									
Illinois Central.....			1						
Freeport Div.....		1							
Galena Div. N. W.....	1		1						
Wis. Div. N. W.....		1							
Wabash.....									
C. & E. I.....									
C., M. & St. P.....			1						
Wis. Cent.....									
C. G. Western.....									
A., T. & S. Fe.....									
Through & Special.....		2							
Total each grade.....	1	10	7	3					
Total sp. wheat.....				21					

RYE.

Railroad.	1	2	3	No Grade.
C., B. & Q.....		16		
C., R. I. & P.....		7	6	
C. & A.....		4	1	
Illinois Central.....		4	1	
Freeport Div.....		5		
Galena Div. N. W.....		7		
Wisconsin Div. N. W.....		10		
Wabash.....			2	
C. & E. I.....		5	11	
C., M. & St. P.....		22	1	
Wisconsin Central.....				
C. G. Western.....		1		
A., T. & S. Fe.....		1	1	
Through & Special.....		9	3	
Total each grade.....		91	26	
Total rye.....				117

BARLEY.

Railroad.	Bay Brewing.	Chevalier.	3	2	3	4	5	No Grade.	Total No. Cars all grain by Roads.
C., B. & Q.....			88	23	1				3,139
C., R. I. & P.....				151	1			1	1,588
C. & A.....									1,913
Illinois Central.....									4,195
Freeport Div.....				101	2				407
Galena Div. N. W.....			3	116	3	1			832
Wis. Div. N. W.....			251	355	66	3	13		797
Wabash.....									1,593
C. & E. I.....								1	1,455
C., M. & St. P.....			297	659	8	10	1		1,423
Wisconsin Central.....				1					5
C. G. Western.....			29	235	36	2			596
A., T. & S. Fe.....				3					1,247
Through & Spec'l.....				3	1				2,161
Total each grade.....			659	1,647	118	16	16		21,351
Total barley.....								2,457	
Total grain.....									

One car of No. 1 barley does not appear in above table.

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during September, 1894 and 1893, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1894 ..	6,103,263	833,195	141,430	947,374	2,404,090	22,159
1893 ..	9,795,429	1,379,325	667,114	1,935,175	399,040	32,090
Shipments.						
1894 ..	9,319,422	608,332	993,613	551,431	1,150,484	2,468
1893 ..	12,041,444	1,343,343	882,542	1,292,064	520,599	8,024

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month ending Sept. 30, as compared with the same period of the preceding year, were, according to Geo. H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	743,600	1,869,400	223,572	465,782
Corn, bushels.....	322,000	1,785,000	102,404	1,328,442
Oats, bushels.....	1,089,000	1,048,300	154,583	242,596
Barley, bushels.....	126,800	35,250	5,296	680
Rye, bushels.....	23,800	13,300	4,678	12,540
Hay, tons.....	15,267	11,087	2,732	1,651
Flour, barrels.....	99,387	97,157	168,259	223,742

DESTINATION OF AMERICAN WHEAT EXPORTS.

The last report of the Bureau of Statistics shows that the destination of the wheat exported from the United States was as follows:

Countries.	Month ending August 31.		Eight months ending August 31.	
	1894.	1893.	1894.	1893.
United Kingdom.....	4,587,172	7,181,985	26,554,650	41,586,729
Germany.....	956,314	412,583	1,913,590	1,982,802
France.....	184,439	2,015,836	2,456,172	7,775,532
Other countries in Europe.....	1,969,269	3,564,174	10,963,586	21,041,533
Brit. North Am. Possessions.....	829,411	1,304,554	3,079,784	5,082,079
Mexico.....	4	267	8,554	6,430
Cent. Am. states & Brit. Hond.....	10,835	4,335	46,497	29,998
West Indies and Bermuda.....		1,420	7,138	10,995
Brazil.....	6		49	16,026
Other countries S. America.....	13	1,650	2,284	5,328
Asia & Oceanica.....	1,162	1,114	8,731	8,137
Africa.....	8,024	27,892	9,401	323,406
Total bushels.....	8,546,649	14,515,810	45,050,736	77,868,995

ELEVATOR AND GRAIN NEWS

Saybrook, Ill. has a new elevator.

Ozark, Ark., is to have a new distillery.

A new elevator is to be built at Minier, Ill.

A cottonseed oil mill is to be erected at Oxford, Ala.

G. H. Edson has bought the Malvern (Ill.) Elevator.

A cottonseed oil mill may be built at Jonesboro, Ark.

G. P. Tolton is in the grain business at Rosalia, Wash.

The Barnard Elevator at Lochiel, Ind., is completed.

It is said that Grant Park, Ill., is to have a \$5,000 elevator.

E. Whittemore, grain dealer of Hudson, Mass., has sold out.

A farmers' elevator may be erected at Hamiota, Manitoba.

S. Brown's large elevator at Kilbourn City, Wis., is completed.

The Seymour Elevator at Kenton, Ohio, is about completed.

Owen Duffy is erecting a 75-ton elevator at Leavenworth, Kan.

Edward Burk is building a grain warehouse at Almira, Wash.

A grain warehouse is being erected at Edgar, Wis., by Mr. Bowe.

Williams, Barrows & Co. have a grain elevator at Burr Oak, Ind.

Spaulding Cartmell has a large grain elevator at Uniontown, Ky.

Large flax manufacturing plants will be erected at Fort Scott, Kan.

Thomas Wilson is building a 4,000-bushel elevator at Rushville, Ill.

The Collision Elevator at Hartland, Wis., has commenced business.

Fred Bestow has just completed his new elevator at Jeffersonville, Ill.

W. T. Lines is erecting a grain warehouse at Edmonton, Manitoba.

The Hoyt Elevator at Chillicothe, Ill., is completed and doing business.

A starch factory and distillery may soon be erected at La Center, Wash.

Phil D. Miller's grain warehouse at Springfield, Ohio, has been closed.

James Yassett is handling grain at Moscow, Wash., for a Seattle grain firm.

Purcell & Co. contemplate erecting a 350,000-bushel house at Kensington, Ill.

Walter Welsh, grain dealer at Stoney Point, Ontario, has made an assignment.

James Dunlap's elevator at Haysville, Ohio, will be rebuilt for the third time.

W. J. Leake is adding a 15,000-bushel oat bin to his elevator at Jefferson, Iowa.

Seeley, Son & Co. are building a 60,000-bushel cleaning elevator at Kansas City.

The Farmers' Alliance is operating a large grain warehouse at Pullman, Wash.

Carrington & Hannah are about to build a 100,000-bushel elevator at Gifford, Ill.

One of the elevators at La Crosse, Wis., has lately added a Dickey Grain Cleaner.

There is probability of a 75,000-bushel elevator being erected at Circleville, Ohio.

Philadelphia capitalists contemplate erecting a pecan elevator at Waco, Texas.

W. L. Luce is contemplating the rebuilding of his burned elevator at Elmhurst, Ill.

Brown & Co.'s elevator at Cushman, Ill., has been rented by a Lintner grain dealer.

The Central Elevator Company is building an addition to its elevator at Tolono, Ill.

The Davenport warehouse at Clear Lake, S. D., is being remodeled into an elevator.

The Morrison Grain & Lumber Company at Morrison, Iowa, has added to its equipment one of the A. P.

Dickey Manufacturing Company's quadruple separators.

William Mull of Lawrence, Kan., will build an elevator of 15,000 bushels' capacity.

Cottrell's elevator at Clarence, Ill., is being improved and increased in capacity.

Wycoff Bros., grain dealers at Arrowsmith, Ill., has been succeeded by Wycoff & Son.

L. Sanborn has established a new office in his grain warehouse at Lime Springs, Iowa.

Cathcart Bros., grain dealers at Kingsley, Iowa, have been succeeded by T. S. Cathcart.

The Acadia (La.) Rice Milling Company has overhauled and improved its rice mill.

The Henry C. Jackson Grain Company has been incorporated at Parkersburg, W. Va.

H. Knudtson's new warehouse at Bowdle, S. D., is now completed and taking in grain.

The Illinois Central Elevator at Cairo, Ill., has been leased by Carrington, Hannah & Co.

The C. Bishop Grain Company has purchased a grain warehouse at Buchanan, Mich.

Howe, Hillsdale & Dean's new elevator at Sauk Center, Minn., is now receiving grain.

A. Reidel has completed his new elevator at Forestville, Mich., and is now doing business.

W. L. Matthews is erecting an elevator to be run in connection with his mill at Marlette, Mich.

M. B. Sheffield of Faribault is erecting a 10,000-bushel grain warehouse at Wisconsin, Minn.

R. B. Gibbs, grain and coal dealer at Morrill, Kau., has been succeeded by Gibbs & Ingham.

A. Moyer & Co. are building their elevator at Listowel, Manitoba, which burned recently.

Hartley Bros. will erect an elevator at Wadena, Ind. Work will not commence this year.

Jacob Smith has obtained possession of E. M. Kinneer's grain warehouse at Sprague, Wash.

A. J. Scott, dealer in grain and lumber at Duncan, Ill., has been succeeded by Scott & Gaines.

The Metz Brewing Company has been incorporated at Omaha, Neb., with a capital of \$250,000.

W. H. Muffley, grain and lumber dealer at Osage, Iowa, has been succeeded by M. A. Sprague.

A new grain elevator has been built in connection with the Oneida Roller Mills at Oneida, N. Y.

Baldwin & Son have succeeded N. W. Thomas & Co., grain and flour dealers at Coaticook, Que.

Parties at Fresnillo, Mexico, are negotiating for the establishment of a corn or rice starch factory.

A new grain commission house has been established at Duluth under the name of C. C. Ames & Co.

A new 25,000-bushel elevator is being built by the St. Mary's Milling Company at St. Mary's, Mo.

Fowler & Sterling, grain and provision commission dealers at Chicago, have dissolved partnership.

Orr Bros. have erected a large elevator at Windsor, Ontario, to be run in connection with their mill.

The two elevators at Lenox, Mich., handled in August 52,000 bushels of grain, principally oats.

P. A. Deyo & Son are building a large elevator at the dock and Ashburton avenue, New York City.

Goodman & Mullikin, a new firm of grain dealers at Bondsville, Ill., have decided to erect an elevator.

The St. Anthony and Dakota Elevator Company is erecting a 35,000-bushel elevator at Colfax, Minn.

The elevator at Hamilton, Mont., has just been equipped with Dickey Warehouse Grain Cleaners.

John P. Johns, grain dealer at Somerville, Ohio, says he is finding plenty of business despite hard times.

The W. D. Mathews Malting Company has been organized at Leroy, N. Y., with a capital of \$300,000.

The Coe Elevator at Pontiac, Ill., has begun to receive grain. The Miller Elevator also is kept busy.

William Koch has taken possession of M. K. Hammond's elevator and grain business at Stockton, Ill.

A Dickey Dustless Separator has lately been put in the elevator at Jewett Mills and at Hammond, Wis.

Levi Johnson has completed his new elevator at Woodruff, Ill., and is already doing a good business.

The Union Elevator Company has changed the location of its principal office from Joliet to Chicago, Ill.

Ed. Johnson, formerly of Osco, Ill., has purchased Poppleton, Sherrard & Co.'s elevator at Geneseo, Ill.

Sykes & Kello of Portsmouth, Va., are interested in a projected grain elevator, to be erected in that city.

It is reported that the elevator companies of the Southwest had a highly satisfactory business last year

with both country and terminal houses, but that the present season has not opened so auspiciously.

The Onalaska Brewing Company has been incorporated at Onalaska, Wis., with a capital of \$14,000.

Smith & Marvel is the name of a new grain firm which has just commenced business at Midland City, Ill.

N. J. Rulison has purchased the Graves Elevator at Seneca, Ill., for \$2,800. Mr. Graves failed some time ago.

The A. P. Dickey Manufacturing Company's warehouse cleaners have been put in the elevator at Vinita, I. T.

Arthur Guenther and Aug. Giesecke will erect an elevator at San Antonio, Texas, where they operate a mill.

Hartley Bros. are erecting a grain elevator at Percy, Ind., which will be run by a 10-horse power gas engine.

The Tileston Milling Company is building a brick elevator of 25,000 bushels' capacity at St. Cloud, Minn.

The ruins of the burned Wackerbarth & Blamer Elevator at Independence, Iowa, were torn down recently.

Work on the Andrews Elevator at Rossville, Ill., has commenced. It will be built on a new plan with dumps.

The Lacy Grain Company of Sioux Falls, S. D., failed recently with liabilities at \$20,000; assets unknown.

Zilliac & Schaffer will commence work on the construction of an elevator at Cynthiana, Ind., next spring.

Hamilton & Rourke, grain dealers at Pendleton, Ore., report lively business at their several warehouses.

A company has been formed to build and operate a brewery at Prince Albert, Ontario, with a capital of \$10,000.

H. Higgins & Co. of Chicago have commenced work on the construction of a new grain warehouse at Ethery, Ill.

The Ennis (Texas) Cotton Oil Company has been incorporated with a capital of \$50,000 to establish an oil mill.

J. H. Dracass, proprietor of the mills and elevator at Streetsville, Ont., has enlarged the capacity of the elevator.

Lister, Andrew & Co., successors to Ed. Andrew & Co., grain dealers at Rossville, Ill., are erecting an elevator.

Chambers, Price & Co. have opened offices at Pullman, Wash., and are establishing a grain exporting business.

The C. Birkhofer Brewing Company has been incorporated at Minneapolis, Minn., with a capital of \$250,000.

The National Milling Company's elevator at Toledo, Ohio, is to be enlarged from 250,000 to 600,000 bushels' capacity.

The South Dakota Grain and Fuel Company has been incorporated at Garretson with a capital stock of \$25,000.

The Cheathan-Baker Grain Company of Pullman, Wash., has been succeeded by the Baker-Madge Grain Company.

The A. P. Dickey Manufacturing Company has put in a number of its elevator grain cleaners in New York City houses.

Milroy & Johnson, grain dealers at Hopkinton, Iowa, have dissolved partnership, Peter Milroy continuing the business.

Joseph Yates Jr. has formed a partnership with his son, A. H. Yates, and is building a granary at Pleasant Grove, Minn.

Granville, Iowa, has two grain firms (reports to the contrary notwithstanding), Wolf & Hinze and Cannon Bros. & Haas.

The Norfolk (Va.) Brewing Company has been organized with a capital of \$150,000 and will erect a modern plant.

Negotiations are being carried on looking to the establishment of a wheat and corn starch factory at Wichita, Kan.

Trexel & Hari, grain merchants at Cissna Park, Ill., have assigned, but will doubtless soon commence business again.

The Mountain City Mill Company of Chattanooga, Tenn., is preparing to erect a 150,000-bushel elevator, to cost \$15,000.

The Central Elevator Company, Minneapolis, re-elected its old officers as follows: F. H. Peavey, president; G. F. Sunwall, vice-president and manager;

J. A. Reed, secretary; C. F. Deaver, treasurer. The officers together with Judge J. I. Best are the directors.

Edward C., Aaron T. and J. Summers have formed a company and commenced a grain dealing business at Milford, Ill. *

Jennison Bros. & Co. have sold their grain elevator at Janesville, Wis., to the Porter Milling Company of Winona, Minn.

The three elevators at Balaton, Minn., have received a good overhauling and are now working all the better for it.

The Idaho Milling, Grain & Power Company of Franklin, Idaho, has discontinued its branch of business at Pocatello.

On account of failing health C. J. Greischar has been compelled to sell his grain and hay business at Kansas City, Mo.

F. M. Black's large elevator at Freemont, Iowa, is now completed. It is the pride of the town and the cock of the walk.

T. C. Gage and L. B. Edmunds have formed a company, and will carry on a grain, hay and feed business at Aberdeen, S. D.

The Ogilvie Milling Company has leased Woodcock's elevator at Chater, Manitoba, and placed W. H. Reid in charge.

The Western Cotton Oil Manufacturing Company has been incorporated at San Antonio, Texas, with a capital of \$100,000.

A company has been organized at Hamilton, Ontario, with a capital of \$100,000, for the establishment of a brewery.

The Winona Mill Company's 250,000-bushel terminal elevator at Winona, Minn., will be ready to receive grain by November 1.

Kinnear Bros. of Seattle, Wash., are building elevators along the line of the Great Northern where they will buy wheat this fall.

L. T. Sowle & Sons' Standard Elevator at Minneapolis is now completed and receiving grain. L. E. Crocker will have charge.

Geo. O. Harrison and W. A. Merrill have formed a partnership and engaged in the grain business at Columbus Junction, Iowa.

The 60,000-bushel elevator at Lochiel, Ind., is nearing completion and will soon receive grain. A gas engine will furnish power.

The Monarch Elevator Company will erect a 35,000-bushel elevator at Grand Bend, N. D., to take the place of the one burned recently.

Erie Canal boatman have formed a company at Buffalo, N. Y., for the construction of a floating elevator to cost about \$40,000.

Crabbs & Reynolds, dealers in grain, seeds, etc., at Crawfordsville, Ind., are making large shipments of clover seed to Toledo, Ohio.

Mobile, Ala., is still hard at work with her committees and sub-committees on that elevator project. She'll have an elevator yet.

One of the elevators at Memphis, Mich., has lately added one of the A. P. Dickey Manufacturing Company's warehouse cleaners.

The Rock Island Elevator at Kansas City, Mo., which will have a capacity of about 500,000 bushels, will be completed January 1.

The Echo Mills Grain Warehouse at Fairfield, Wash., has been leased for this season by Messrs. Sloane, Grishell & Wiseman.

A brewing company has been organized at Rockford, Ill., with a capital stock of \$200,000. A large modern plant will be erected.

J. G. Hoey, late proprietor of an elevator at Chater, Manitoba, is now managing it for a farmers' association with his usual success.

The Webster Manufacturing Company has furnished the machinery for the addition to the Toledo & Wabash Elevator at Toledo, Ohio.

The Simpson & Robinson Company have completed the new malt house and elevator for the L. J. Aaron Company at South Chicago, Ill.

Captain H. C. Peek, a well-known elevator man of Oregon, Ill., has held the office of sheriff of his county for the last four years.

Negotiations are pending between the Winnipeg Grain Exchange and the Canadian Pacific officials at Montreal for the erection of a large elevator at Winnipeg.

Regarding the insurance on D. Milligan & Son's elevator at Eldora, Iowa, the Eldora Herald says: The fire association of Philadelphia settled with D. Milligan & Son for the loss of the elevator and grain which was destroyed recently. The property was insured

for \$2,300, but the company's agent bluffed Fred Milligan into settling for \$2,000.

The firm of Vilmar & Goetze, grain and produce dealers of New York City, has been dissolved, Otto Goetze carrying on the business.

A 25,000-ton warehouse will be erected at Portland, Ore., to take the place of the one recently destroyed by fire. Sealed bids are wanted.

The A. P. Dickey Manufacturing Company's grain cleaners have been put in the elevators at Society Hill, S. C., and Haubstadt, Ind.

The Eastman Mill Company have begun the erection of a 150,000-bushel elevator at La Crosse, Wis., to be used in connection with the mill.

Fred Plate, grain dealer at Maryland Station, Ill., who failed some time ago, has started up again, and says he will pay dollar for dollar.

The elevator owned by C. J. Miller & Co., at Swartz Creek, Mich., has recently been supplied with a receiving separator and gas engine.

Ogilvie's elevator at Glenboro, Manitoba, reports, as one day's business last month, shipped 22 cars of wheat and received 7,000 bushels.

The A. P. Dickey Manufacturing Company's grain cleaners have lately been put in elevators at Chicago, and in the elevator at Ottawa, Ill.

The A. P. Dickey Manufacturing Company has lately put in one of its large size grain cleaners for elevator use at Leavenworth, Kan.

Seeley, Son & Co. have recently completed a 15,000-bushel elevator at Pilger, Neb., for Mr. Vale. Power is supplied by a Lewis Gas Engine.

The Nebraska City Cereal Mills of Nebraska City, Neb., have ordered a second automatic scale of the Chicago Automatic Scale Company.

Walter Bros., grain dealers at Ida Grove, Iowa, have assigned on account of the depression in wheat. Their liabilities are \$20,000, assets \$12,000.

W. J. Bawlf, produce, flour and grain dealer, Port Arthur, Ontario, has moved to Winnipeg, where he will engage in the same line of trade.

The agitation for that large grain warehouse at Seattle, Wash., still goes merrily on, but the railroads still stickle at the switching charges.

Kansas City exporters are said to be shipping grain to Champaign, Ill., where it is transferred and shipped direct to Liverpool via Newport News.

The addition to W. A. Coombs' elevator at Coldwater, Mich., is now completed, and enlarges the capacity of the plant to 85,000 bushels.

J. L. Mead & Co. have purchased W. A. Poyer's grain warehouse at Norwalk, Ohio. The new firm expects to establish a prosperous business.

The A. P. Dickey Manufacturing Company has lately equipped the elevators at Kimmell, Ind., and Oto, Iowa, with its overblast separators.

Farmers' elevators at Cypress River and Holland, Manitoba, have declared a dividend of 12 and 14 per cent. respectively for the last crop year.

R. E. Pratt & Co. of Decatur, Ill., have built an addition to their elevator at Grand Crossing, thereby increasing the capacity to 100,000 bushels.

Bartlett, Frazier & Co.'s elevator at South Chicago, Ill., is being equipped with a full line of machinery by the Webster Manufacturing Company.

The Chicago and Pacific Elevator Company of Chicago has begun suit to compel J. M. Parr & Son to pay a balance due on wheat transactions.

The farmers' warehouse at Mapleton, Minn., is said to have shipped three times as much grain thus far this season as for the same period last year.

Heineman & Co., general merchants at Tehachapi, Cal., advanced money on grain before harvest, and when grain went down the company failed.

A Farmers' Elevator Company has been incorporated at James Station, S. D., with a capital of \$2,500. Albert Draeger and others are the incorporators.

A check forged in the name of Reed & Co., grain dealers at Tacoma, Wash., was accepted at the bank at that city recently, and the forger disappeared.

M. T. and H. R. Gass of Flint, Mich., have been offered a bonus of \$15,000 to erect an elevator at Mobile, Ala., whither they have gone to negotiate.

G. S. Barnes & Co. of Minneapolis have opened a grain commission house at Duluth under the management of John Shely, formerly chief state grain inspector.

A one-eyed man successfully worked the old Richland game on gullible Philadelphians recently. He represented himself as the agent of Pratt & Co. of Decatur, Ill., and sold 10 cars of invisible corn and got \$75 on a draft. As another achievement he pro-

cured 5,000 grain sacks from a certain firm and shipped them to Pratt & Co. He was not apprehended.

During the five weeks ending September 29 there was shipped from Winnipeg 633 bushels of wheat, against 1,095 bushels during the same time in 1893.

It is reported that Armour of Chicago is going to store a half million bushels grain in Peoria, Ill. Union Elevators Nos. 1 and 2 will be used, it is said.

A large cottonseed oil mill will be erected at Jacksonville, Ala., by the Jacksonville Oil Mill Company. It will be equipped with the latest improved machinery.

C. A. Rogers, a Chicago grain broker, has been arrested on the charge of violating the postal laws. It is alleged that he addressed threatening postal cards to a debtor.

The Simpson & Robinson Company are building a 1,500,000-bushel elevator for Keith & Co. on the South branch of the Chicago River, near Eighteenth street, in Chicago.

The hay and straw commission firm of Slocum & Townsend of New York City has been dissolved. J. G. Slocum together with John Ratzer will continue the business.

The Heidenreich Company are building an annex of 1,250,000 bushels' capacity to the Union Elevator at Chicago for the Chicago Railway and Terminal Elevator Company.

The St. Anthony and Dakota Elevator Company is erecting an elevator of 30,000 bushels' capacity at Wylie, Minn., and 25,000-bushel houses at Cavalier and Nash, N. D.

The Fauerbach Brewing Company, Madison, Wis., are making extensive improvements in their plant. Their old brewery is to be entirely torn down and a new one erected.

Mr. S. T. Lupe, proprietor of the Sedalia Elevator at Sedalia, Mo., writes us that the published report that he had sold out his business at that place is altogether unfounded.

Crockett Bros. & Sanborn, doing a grain, hay, flour and provision commission business at Boston, Mass., have dissolved. C. B. Crockett, G. W. Crockett and J. L. Arsenault continuing.

Geo. D. Laing's elevator at Dixon, Ill., is just completed. It is equipped with modern machinery and a 17-horse power electric dynamo supplies power. The capacity is 12,000 bushels.

The Kansas City Hay Press Company will soon commence the erection of a new elevator on the site of the Advance Elevator in Kansas City, Mo., which was burned some time ago.

The Des Moines (Iowa) Elevator Company has been incorporated with a capital stock of \$30,000. The incorporators are C. F. McCarty, L. Mott, B. A. and Lee Lockwood and M. McFarlin.

Valentine & Co. have been incorporated at Chicago, with a capital of \$100,000, to deal in grain, provisions, etc. The incorporators are G. A. Arbogast, E. S. Tillotson and Sabina Connolly.

G. S. Eggleston is using a new dump at his elevator at Gibson, Ill. Grain is dumped into a car on the ground and elevated by means of block and tackle and the team delivering the wheat.

Mr. Rouinthaite, manager of the farmers' elevator at Brandon, Manitoba, states that he has taken the greatest amount of grain at his elevator received in one day at that place this season.

Tromanhouer Bros. have the contract for erecting an elevator to be run in connection with the La Grange Mills at Red Wing, Minn. It will be 48x50 feet and have a capacity of 80,000 bushels.

Judgment has been entered against the firm of Sawyer, Wallace & Co., grain merchants of New York City and Louisville, Ky., who failed in September, 1890, with liabilities of \$144,000.

It is reported that Manitoba wheat is pouring into Duluth at a rate never before equaled. In the first week of October the receipts equaled those of the three preceding weeks of September.

The mandamus proceedings brought by Murray Nelson against the Chicago Board of Trade is having a hearing in the courts. Mr. Nelson has brought suit to enforce his re-instatement to membership of the board.

The partnership existing between Bateman & Chapin, lumber, implement and grain merchants, Harthey, Manitoba, has been dissolved by mutual consent. The business will be continued by F. Chapin.

The floating elevator, Empire, located at the Tift Farm, Buffalo, is said to be the smartest one legged elevator in the state of New York. It is capable of loading a canal boat with 8,000 bushels of wheat in 40 minutes. It is provided with steam capstans for

shifting, steam shovels and all other modern improvements. It is manned by experts who lose very little time in shifting from one hatch to another, or from one vessel to another.—*Canal Defender*.

L. S. Hogeboom, representative of The Knickerbocker Company has sold six No. 7 and four No. 8 Cyclone Dust Collectors to be put in Bartlett, Frazier & Co.'s elevator at South Chicago, Ill.

Country elevators in the Northwest are complaining of lack of cars to handle grain. In some less blessed parts of the country elevator men are complaining of the lack of grain to handle.

J. U. Adams & Co., a large grain firm in Minneapolis, has opened a branch office at Seattle, Wash. E. Cardin is manager and business will be done on a large scale as soon as the firm can get settled.

On account of the short corn crop and consequent lack of grain to handle, Charles Counselman, the Chicago elevator man, has closed about half of his country houses in Iowa, Kansas and Nebraska.

George Davies has retired from the firm of the Cleveland Grain and Commission Company of Cleveland, Ohio. The business will now be carried on by Charles Herman, A. C. Guth and A. S. Kohl.

Work has commenced on a new elevator for the Saginaw Milling Company at Saginaw, Mich. The building will be 22x70 feet, and about the same height as the mill. It will have a capacity of 45,000 bushels.

C. H. Vanderwalker, feed and coal dealer at Argentine, Mo., has purchased a feed grinder and made arrangements for carrying on a retail trade. His example might profitably be followed by elevator men.

The Ottoson Grain and Coal Company of Badger, Iowa, which has elevators at Humboldt, Badger, Vincent and Ft. Dodge, has been incorporated with a capital of \$10,000. O. and Chris. Ottoson are the incorporators.

A co-operative shipping association has been organized at Tonica, Ill., by the farmers of the vicinity, of which A. G. Robinson is president and C. A. Knapp secretary. The association own and will attempt to operate a new elevator.

An addition is being built to the Three-I elevator at Kankakee, Ill., which will enlarge its capacity from 150,000 to 200,000 bushels. The engine house is also being enlarged, and a 100-horse power engine will take the place of the present one.

The Western Supply Company has been incorporated at Lawrence, Kan., with a capital stock of \$25,000. Directors: A. Hendley, J. Underwood, H. E. Benson, G. R. Gould and J. R. Greenlees. The company will carry on a grain business.

Considerable excitement was caused at Elyria, Ohio, by the finding of a dynamite bomb with a fuse attached in the Lake Shore and Michigan Central Elevator October 3. If the bomb had exploded the elevator would have been wrecked.

Lilly, Bogardus & Co., extensive dealers in hay, grain and feed at Seattle, Wash., have been incorporated with a capital stock of \$50,000, and have opened a branch house at Whatcom under the incorporate name of Lilly, Bogardus & Bacon.

Harris & Co., grain dealers, have been incorporated at Lincoln, Neb., with a capital stock of \$140,000. The incorporators are F. L. Harris, A. K. Root, E. Lindsey and John H. Ames. F. L. Harris' elevator and other property has been purchased.

There are about 900,000 bushels of wheat in elevators in Monroe County, N. Y., including much of the crops of 1892 and 1893. In 1892 this wheat would have brought \$1.02, now it will be sold (if that is possible) for half that amount. Hold your wheat!

Frederick Kiorboe has brought suit against the Miller Grain and Elevator Company at St. Louis, Mo., to recover damages for alleged breach of contract by defendants in failing to ship a specified quantity of grain from St. Louis to Norfolk, Va., for export.

The new marine elevator annex at Buffalo, N. Y., with a capacity of 650,000 bushels, added to the old elevator, with room for 130,000 bushels, is completed. The work was done in sixty days. A reception was given by the company to the marine and other interests.

F. H. Peavey & Co., the Minneapolis elevator firm, has decided to go into the grain and feed commission business on an extensive scale. They will solicit consignments of mill feed, etc. It is surprising that small houses are not alive to the profits in the feed business.

W. S. Jackson's elevator at Idaho Falls, Idaho, has been improved and increased in capacity to 100,000 bushels; a handling capacity of 500 bushels per hour, and cleaning and grading 300 bushels per hour. Its value is now \$25,000, and an increased business is looked for this year.

The elevator men and the merchants of Hector, Minn., have declared war. The latter announced their intention of running an independent elevator and paying such prices for grain that the farmers' trade would be drawn to it. The Monarch and Victoria Elevator Companies will play tit for tat and open general stores and compete with the merchants. There is similar trouble at Renville, where the Em-

pire Elevator Company will open a store. What degree of clemency will be allowed the merchants?

The Nashville & Chattanooga Railroad Company has let contract to Burke Bros. for the erection of buildings for a grain elevator at Bridgeport, Ala. The plant is to have a capacity of 150 carloads, 100x200 feet, and be completed in sixty days at an estimated cost of \$15,000.

W. E. Sherer, Minneapolis agent for S. Howes of Silver Creek, N. Y., has taken orders for Eureka Grain Cleaners as follows: One No. 5 scourer for Osborne & McMillan Elevator, one No. 5 scourer to Sowle & Sons for the Standard Elevator, one No. 5 oat clipper to E. S. Woodworth & Co. for the Shoreham Elevator.

The Metcalf-McDonald Company is building a 100,000-bushel addition to the E. R. Pratt Elevator at Seventy-fourth street and Western avenue, Chicago. The elevator will be ready to receive grain within thirty days from date of contract. The elevator builder has to hustle when he does get anything to do nowadays.

An heir to two and one-half acres of land in Minneapolis, which is occupied by the Minneapolis Union Elevator Company, has brought suit to compel the company to vacate. Some years ago the owner refused to sell this property and it was condemned for railway purposes and finally secured by the elevator company.

Elevator companies at Fairfax, Minn., are beginning what may be a hot fight with the Norton Milling Company. The milling company overbid the elevators in buying farmers' wheat and got most of the trade; now the elevators have joined forces and are shipping in flour to compete with the Norton company's business.

The partial failure of the corn crop in Kansas and Nebraska has caused the St. Joseph & Grand Island Railroad to temporarily abandon a number of small grain stations. The stations at Pauline, LeRoy, Spring Branch, Huntley, Keene, Verona, Lushton, Burres, Endicott and Hansen, all in Nebraska, have already been closed.

The first grain elevator in the world operated by the pneumatic process is now daily receiving and shipping grain in Toledo. Suction and blast are the two common words that express the process. The former to elevate, and the latter to expel the grain. It is a perfect success, so far, and a credit to the proprietors.—*Toledo Market Report*.

The Canadian Pacific Railroad has reduced elevator rates at Manitoba country $\frac{1}{2}$ @ $1\frac{1}{2}$ cents per bushel, including 20 days storage. Port William elevator rates have been reduced to $\frac{1}{2}$ cent, including 20 days storage, and $\frac{1}{2}$ cent for each subsequent 30 days. This reduction will be very beneficial to farmers in handling their heavy crops.

At the annual meeting of the S. Y. Hyde Elevator Company at La Crosse, Wis., the following officers were elected: S. Y. Hyde, president and manager; H. J. O'Neill, vice-president; C. W. Thompson, treasurer; E. E. Clark, secretary. The board of directors are S. Y. Hyde, H. J. O'Neill and C. E. Bennett. A cash dividend was declared.

The National Elevator imbroglio is troubling the Chicago grain trade again just when everything seemed settled. The National's receipts are under the grain in other houses, and as December delivery is the last one on which the receipts will be regular, as this time approaches the discount will increase, unless some settlement is made and Murry Nelson's house is declared regular.

The number of houses being erected by the Great Northern Elevator Company has been noticed in these columns from time to time. This company has shown great enterprise this summer, and proved itself worthy of its name. It has new houses at Portland Junction, Hope, Murray and Ardock, N. D., and at Rothsay and Graceville, Minn., all of which are from 30,000 to 40,000 bushels' capacity.

By order of the court the interior houses belonging to the Northern Pacific Elevator Company will be sold at the court house at Moorehead, Minn., on October 29. The Lake Superior and the Union Improvement Elevator Companies have also been directed to sell their terminal houses on the same date at Duluth. Provision is made for paying first liens and bringing the rest of the proceeds into court for distribution.

We note that the Kineon Coal Company of Cincinnati, which is building the largest coal pockets in the West, has contracted with Borden & Selleck Company of Chicago to equip the entire plant with the Harrison Roller Flight Conveyors and Elevators with capacity of 1,000 tons per day. This will be one of the most modern up-to-date systems of pockets in the country and will be of considerable interest in coal circles.

Manitoba farmers are telling each other that the local grain shippers are making unduly large profits handling their grain, mixing their grades, etc., and are considering the feasibility of handling their own grain under the auspices of the Patrons of Industry. It is proposed to put a million bushels of No. 1 Hard Manitoba on the English market, selling it by samples furnished in advance, thus evading the felonious at-

tempt of the mixers. It is to be hoped that the Patrons have more experience than would be indicated by their shipping grain to Liverpool to discover the margin upon which local shippers operate.

Axel Johnson has brought suit against M. Considine & Son, grain and hay commission dealers at Chicago, to recover \$50,000 damages. Johnson is a hay and feed dealer and he alleges that Considine & Son caused his assignment by getting him to execute a judgment note for \$700.

Peculating employees of the Tacoma (Wash.) Warehouse and Elevator Company were recently caught red-handed and a course of wheat stealing covering a year in time came to an end. The amount or number of the thefts is not known, but many complaints had been made. They were not prosecuted.

A Superior, Wis., paper says: The two Monitor Flax Cleaners recently put in the Belt Line Elevator by B. F. Ryer of Chicago, general agent for Huntley, Cranson & Hammond, have been thoroughly tested and proved highly satisfactory. Recently the Belt Line Company shipped a 65,000-bushel cargo of flax, which was cleaned by the machines.

The new O'Neill Elevator at South Chicago, Ill., shipped its first cargo of grain September 20. For the balance of the season the new elevator will be devoted exclusively to barley, and it is probable that but little grain except barley will ever be handled there. The trade in barley is thus moved from Milwaukee to Chicago. For many years H. J. O'Neill, the barley king, has shipped immense quantities of that grain from the West to the lakes, Milwaukee having been his lake port.

The courts have entered an order authorizing the receiver for the D. Eggleston & Son Company of Chicago, Ill., to borrow \$185,000 on account of that corporation to redeem the Neely grain elevator from foreclosure sale. The insolvent commission firm holds two claims against Albert C. Neely, owner of the elevator, secured on the warehouse property. One for \$30,000 is a second-lien on the elevator and the other for \$40,000 is a fourth or fifth lien. The elevator is estimated to be worth \$250,000 and to realize a net profit of from \$1,200 to \$2,000 a month.

A swindling game whereby Kansas City grain merchants would have been heavy losers was nipped in the bud recently. A young man representing himself as J. T. Morse of St. Joseph and a representative of Sharp & Hayes, grain shippers of Miltonvale, Kan., presented a forged bill of lading for five cars of oats to W. H. Booth & Co. and requested an advance of \$1,400 on it. The firm was suspicious and had the stranger arrested, when he confessed. The operations of a certain Richard are not yet forgotten, and the grain men are much pleased over the detection of a like swindler.

IMPORTS AND EXPORTS OF FOREIGN BREADSTUFFS.

The total value of breadstuffs imported during August, according to the last report of the Bureau of Statistics, was \$160,680, against an amount valued at \$45,622 imported in August 1893; and during the eight months ending with August breadstuffs valued at \$842,070 were imported, against an amount valued at \$1,139,053 imported during the corresponding months ending with August, 1893. Barley aggregating 299,924 bushels, valued at \$136,360, was imported during the eight months ending with August, against 776,005 bushels, valued at \$352,378, imported during the corresponding months ending with August 1893. Corn aggregating 1,909 bushels, valued at \$1,056, was imported during the eight months ending with August, against 1,605 bushels, valued at \$1,086, imported during the corresponding months ending with August, 1893.

We imported 9,503 bushels of oats, valued at \$4,385, during the eight months ending with August, against 16,925 bushels, valued at \$7,435, imported during the eight months ending with August preceding.

Rye amounting to 95 bushels was imported during the eight months ending with August, against 8,453 bushels, valued at \$6,764, imported during the corresponding months of the year preceding. Wheat aggregating 551,846 bushels, valued at \$330,109, was imported during the eight months ending with August, against 302,645 bushels, valued at \$232,346, imported during the eight months ending with August preceding.

Of imported breadstuffs an amount valued at \$16,253 was exported during August, against an amount valued at \$333 in August, 1893; and during the eight months ending with August breadstuffs valued at \$175,088 were exported, against an amount valued at \$169,550 exported during the eight months ending with August, 1893. Imported barley aggregating 19,305 bushels, valued at \$96,972, was exported during the eight months ending with August, against 28,983 bushels, valued at \$14,493, exported during the eight months ending with August, 1893. Imported wheat amounting to 251,910 bushels, valued at \$147,595, was exported during the eight months ending with August, against 197,177 bushels, valued at \$140,654, exported during the corresponding months ending with August, 1893.

CROP : CONDITIONS.

TENNESSEE, GLENLOCH, MONROE Co., September 27.—Everything is dried up and farmers are unable to plow. Corn is fine, and sells at 55 cents. T. JONES.

CLOVER SEED IN OHIO.—Reports from Northern Ohio point to a fair yield of good quality. In the middle section clover seed will yield light generally, reports from some localities indicating good yield. In the southern section of the state clover seed yields very light.

WASHINGTON, PALOUSE, WHITMAN Co., October 4.—The crop of the Palouse country is average. Prices are low with the exception of flax, and farmers who sowed that have no cause for complaint, as the yield is good, from 12 to 15 bushels per acre, and worth about \$1 per bushel. CHALMERS & CO.

THE HAY CROP.—The promise of a heavy yield throughout the hay growing sections has not been fulfilled. The total crop is estimated at 60,250,000 tons, against 65,000,000 tons in 1893. The chief shortage is in the central states where the drouth was most severe. The Eastern states also show a shortage, while the middle states have an average crop and the Southern states an increase.

THE CORN CROP.—Reports received by the Chicago *Trade Bulletin* from the principal corn-raising sections of the United States indicate a very irregular yield and show very few sections where a full crop was obtained. West of the Mississippi very small yields have been the rule, and in Central Western states the yield is reported not so good as anticipated. The supply of old corn is small, and farmers are economizing by feeding wheat.

OHIO CROPS.—The official crop report for the state of Ohio contains the following: Wheat, area for harvest, 1894, 2,516,566 acres; product per acre, 20 bushels; total estimated product, 50,852,433; quality, 98 per cent. The wheat crop is the largest in the state's history. The corn crop will be 30,000,000 bushels short as an average crop. Oats, area, 981,456 acres; product per acre, 32.4 bushels; quality, 91 per cent.; whole product, 31,872,300 bushels. Barley, area for harvest, 15,219 acres; product per acre, 29.8 bushels; total product, 455,687; quality, 93 per cent. Corn, area for 1894, 2,828,517 acres; prospect compared with a full average, 64 per cent. Potatoes, area for 1894, 142,680 acres; prospect, 52 per cent.

WHEAT IN MANITOBA.—The Western Grain Standards Board met in Winnipeg on September 18 for the purpose of fixing the standards for grading the present crop. Bags of wheat from all over the country, numbering in the hundreds, had been collected for the purpose of affording the members of the board an idea as to the average quality of the crop, and if the wheat will average all around as good as these samples it certainly is a magnificent crop in point of quality. The samples are probably the best ever gathered together in Winnipeg for any previous meeting of the grain standards board. The wheat is plump, dry, bright, nearly all pure Hard wheat, and of extra heavy weight to the measured bushel. In the language of Inspector Horn, it is simply magnificent wheat. Last year's crop was of very fine average quality, but this year's is better, particularly in respect to the plumper berry. The samples gathered, which no doubt indicate a fair average of the crop, show it to be an excellent milling quality. Millers never had better wheat to work upon than the quality of the Manitoba crop of 1894. We have to go back to the year 1886 to find a crop of as average good quality as the present year, while the yield this year is much better than in 1886. There may be a little more smut this year than last, but the weather has been favorable for handling smutty wheat, and if due care is taken the bad effects of the smut can be overcome. As regards the production of wheat this year, it is also pleasing to note that the yield per acre in Manitoba is turning out larger than was previously estimated. Threshing has made considerable progress, and threshing returns, which are the most reliable reports, indicate a larger average yield in many districts than was accredited in earlier estimates. An export surplus of 15,000,000 to 16,000,000 bushels is now counted upon from the 1,000,000 acres in crop in Manitoba this year.—*The Commercial, Winnipeg.*

GOVERNMENT CROP REPORT.—The October returns to the statistician of the Department of Agriculture makes the general condition of corn as not materially differing from that of last month, it being 64.2, against 63.4 in September, a gain of .8 of 1 per cent. In most of the Southern states the condition of corn has fallen since the last report, but in some of the Western states there have been slight gains in condition. The averages of condition in the largest surplus corn growing states are as follows: Tennessee, 88; Kentucky, 77; Ohio, 71; Michigan, 56; Indiana, 78; Illinois, 78; Wisconsin, 54; Minnesota, 59; Iowa, 47; Missouri, 70; Kansas, 45; Nebraska, 14; South Dakota, 44; North Dakota, 80; California, 94. **WHEAT**—The returns of yield per acre of wheat indicate a production of about 13.1 bushels, being 1.8 bushels greater than the last October preliminary estimate. The rate of yield by states is as follows: New York, 14.8;

Pennsylvania, 15.3; Ohio, 19.4; Michigan, 15.8; Indiana, 19.4; Illinois, 18.3; Wisconsin, 16.5; Minnesota, 12.9; Iowa, 14.8; Missouri, 15.6; Kansas, 10.4; Nebraska, 6.5; South Dakota, 3.4; North Dakota, 11.2; Washington, 16.6; Oregon, 17.7; California, 11.3. The indicated quality of wheat for the country is 93.5. The quality in some of the principal wheat states is as follows: New York, 93; Pennsylvania, 95; Kentucky, 95; Ohio, 100; Michigan, 92; Indiana, 98; Illinois, 97; Wisconsin, 90; Minnesota, 94; Iowa, 96; Missouri, 97; Kansas, 83; Nebraska, 78; South Dakota, 86; North Dakota, 93; Washington, 99; Oregon, 94; California, 95. **OATS**—The returns of yield of oats per acre indicate a yield of 24.5 bushels, being one bushel more than the estimate for last October. **RYE**—The average yield of rye is 13.7 bushels, against 13.3 bushels in 1893, and 12.7 in 1892. **BARLEY**—The general average yield of barley is 19.3 bushels, against 21.7 bushels in 1893 and 23.7 in 1892. **BUCKWHEAT**—The condition of buckwheat as reported is 72, against 69.2 last month and 73.5 on Oct. 1, 1893. **POTATOES**—The condition of potatoes is 64.3, against 62.4 last month and 71.2 at same time last year.

WATERWAYS

Work on the Panamā Canal recommenced October 1.

The Hennepin Canal is now completed from the Mississippi River to the Rock River, Illinois.

Repairs have been made to the railroads injured by recent forest fires in Minnesota, and grain shipping is again active.

The opening of a waterway for grain and other freight from Lake Superior to Red River in Manitoba is being discussed.

Ship City of Athens sailed for the United Kingdom with the first cargo of wheat shipped from Tacoma this season, October 4.

The present season of lake navigation has not proved very profitable to vessel owners, and freight rates have averaged low.

Steps have been taken looking toward the securing of a right of way for a canal connecting Lake Washington with the sound in Washington.

The New York Chamber of Commerce recently passed resolutions in favor of canal improvements, and recommending appropriations for same.

The Lachine Canal in Ontario is to be deepened to 15 feet. The estimated cost of the work is \$250,000, and it is expected to be finished in the fall of 1896.

August was the banner month for freight traffic at the head of the lakes. It is said that in that month occurred the heaviest traffic, in and out, ever known.

The St. Louis and New Orleans barge line has ceased receiving freight, on account of the low stage of water in the river, and may not resume business until next spring.

The Chicago Board of Marine Underwriters has advanced grain insurance rates to the following figures: To Port Huron, 60 cents; Buffalo, 70 cents; Montreal, 90 cents.

Four engineering parties are surveying routes for a ship canal between Lake Superior and the Mississippi River. It is said there are six possible routes in Wisconsin and more in Minnesota. The most practical route is via the North Pole.

The Cleveland, Ohio, Chamber of Commerce has appointed a committee to look after harbor interests of that port and to prod the government for improvements. The committee will move for a 20-foot channel connecting the foot of Lake Erie with the head of Lake Superior.

Manchester, England, has thus far been disappointed in her expectations of the great success of her canal. It was hardly to be expected that an immediate success awaited the canal. Trade is not easily diverted into a new waterway, and what may be very fine in theory is often a failure in practice.

Traffic through the "Soo" Canal in August, 1894, was greater than for the whole first eight and one-half years, exceeding the entire commerce from 1855 to the middle of 1863. On August 20 105,097 tons of freight passed through the canal, exceeding the amount in either of the first two years.

It is reported that the Canadian "Soo" Canal will be ready for navigation within a couple of weeks. Work was commenced May 1, 1889. The canal is similar to the one on the United States side of the river. It is 3,700 feet long, and has been completed at a cost within the appropriation, \$4,000,000. The formal opening has been deferred until next spring.

County commissioners have agreed to the issue of bonds in the sum of \$1,000,000 to aid in the construction of a canal from the Platte River to Omaha, Neb. Practical engineers are said to have reported the

scheme as "feasible." Experts can always be secured to indorse any scheme that gives promise of profit to them.

The board of U. S. army engineers are asked to recommend an expenditure of \$2,500,000 for the improvement of the Duluth and Superior harbors, all harbor channels to be made 400 feet wide and 20 feet deep. Money could be more profitably expended on such enterprises than thrown to the winds of some crazy canal scheme.

For the first time in a decade a wreck occurred on the Illinois and Michigan Canal on the night of September 18. The Norton Milling Company's steam canal boat, First National, laden with 6,000 bushels wheat for the Norton Mills at Lockport, Ill., collided with another boat and sank instantly. There was an insurance of \$3,000 on the wheat.

Engineers have been surveying for a proposed canal connecting Toledo and Chicago. The line of the canal as shown by the survey is from Chicago across Lake Michigan to Michigan City, to Elkhart, through a series of lakes and rivers to the Maumee, close to the state line down the Wabash Canal, taking in Defiance and Napoleon, Ohio, making Toledo the terminus.

The several proposed routes for waterways that will connect Pittsburg with Lake Erie have been surveyed, and the engineering committee (why shouldn't it?) has reported the scheme entirely practicable. As a preliminary it is said that \$100,000 in bonds will be issued. It is also rumored that English capitalists will invest \$30,000,000—which we doubt very much.

Incorporation papers are being prepared for an organization to push the ship canal connecting Lake Michigan with Lake Erie. It is claimed that such a waterway would shorten the present lake route a hundred miles or so: its cost will be at least \$12,000,000. The expense of the trip and the time lost in making it would drive business to the natural route via Mackinac.

During the five months ending September 30 shipments of grain by canal at Buffalo amounted to 36,101,310 bushels, against 34,418,143 bushels during the corresponding five months of last year. In the nine months ending Sept. 30, 1893, grain shipments from Buffalo by rail amounted to 53,928,709 bushels, against 23,037,542 bushels this year. This looks bright indeed for the canal; but the returns on flour shipments show a peculiarity. The total shipment of flour from Buffalo during the time from the opening of navigation to October 1 was 7,101,860 barrels. The canal carried 2,337 barrels.

In consequence of the scarcity of Canadian vessels H. C. Crowe & Co., grain dealers of Winnipeg who ships their grain to Montreal via Duluth, have had to engage American boats, and have thereby got into a difficulty with the customs authorities. Grain coming from Duluth in American boats was not allowed to be discharged at Canadian ports. On account of this sagacious move of the Canadian customs official the Kingston and Montreal Forwarding Company of Toronto has been idle for several weeks, while 500,000 bushels of grain have passed through by the American route, and transhipped at Ogdensburg for Montreal.

Many canal projects were discussed at the recent deep waterway convention held at Toronto. The main purpose of the convention, however, was to consider the deepening of the St. Lawrence River waterway route. A committee reported favorably on the deepening of the waterways along the proposed route to a depth of 21 feet, recommending an investigation as to cost, etc., by the United States and Canada. The resolutions were unanimously adopted. The International Deep Waterways Association was organized to further the interests of the project. And now the first quarrel is on. The convention is charged with having been "captured in the interests of the West," calling for a depth of 21 feet throughout when the interests of Canada demanded a depth of 14 feet.

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

Edward R. Taylor, Cleveland, Ohio.
Aug. Wolf of Aug. Wolf & Co., Chambersburg, Pa.
D. W. Comstock of Holister, Crane & Co., New York City.
G. M. Robinson of the Charter Gas Engine Company, Sterling, Ill.
C. G. Hammond of Huntley, Cranson & Hammond, Silver Creek, N. Y.
J. D. Sheahan of the Millers' National Insurance Company, Chicago.
L. S. Hogeboom, representative of The Knickerbocker Company, Jacksonville, Mich.
M. M. Snider, representing the Barnard & Leas Manufacturing Company, Des Moines, Iowa.

From September 1 to October 6, 4,200 bushels clover seed were exported from Baltimore, against 30,681 bushels in the same period in 1893.

Fires, Casualties, Etc.

Ferguson's Elevator at Grafton, Neb., was burned October 3.

Nelson, Lund & Co.'s elevator at Grove City, Minn., collapsed recently.

A small cyclone demolished the elevator at Seney, Iowa, September 22.

An elevator at Oelwein, Iowa, was demolished by a cyclone September 22.

Scott & McCord, grain and hay dealers at San Francisco, Cal., were burned out recently.

The Amana Society's elevator at Amana, Iowa, suffered a loss of \$12,000 by fire September 20.

A derrick used in erecting the Freeman elevator at Superior, Wis., fell recently, injuring two men.

Somers & Co., hay and grain dealers at San Francisco, Cal., suffered a loss by fire some time ago.

The Glucose Grain Company's elevator at Maine, Shelby Co., Iowa, was destroyed by fire recently.

J. P. Schroeder & Co., dealers in grain, etc., at Dubuque, Iowa, sustained a loss by fire recently.

J. B. Ward's grain elevator at Gardner, Kan., with its contents, was burned September 29. Loss \$10,000.

A. L. Hurtubise & Co.'s grain warehouse at Montreal, Ontario, was destroyed by fire recently at a loss of \$25,000.

The Pioneer Lumber Company, dealers in grain, lumber and coal at Rushville, Neb., recently sustained a loss by fire.

Law Bros', flat warehouse at Stanton, Minn., together with 8,000 bushels of grain, was destroyed by fire September 22.

The D. Rothschild Grain Company's malthouse at Davenport, Iowa, burned September 19 at a loss of \$20,000; insurance \$15,000.

Grain warehouses and other buildings at Platte Center, Neb., were destroyed by the fire recently at a loss of \$4,000. Insurance \$1,000.

The St. Paul and Kansas City elevator at Persia, Iowa, was destroyed by fire September 18, together with a number of corn cribs.

The Rock Island Brewing Company's warehouse at Rock Island, Ill., was destroyed by an incendiary fire September 23 at a loss of \$10,000.

R. W. Clement's feed mills and grain cribs at Brookfield, Mo., were burned October 1. The loss was almost entirely covered by insurance.

Riley & Pew's elevator at Montpelier, Ind., was burned October 1, at a loss of \$6,000; insurance \$3,000. The fire started in the cupola.

Riley's elevator at Cypress River, Manitoba, burned recently together with 10,000 bushels wheat contained therein. Loss \$9,000; insurance \$1,250.

The Central Elevator Company's elevator at Chaska, Minn., was burned recently, together with 1,000 bushels wheat, at a loss of \$2,000. Insured.

Ward & Currier's elevator at Gardner, Kan., was burned October 1 at an estimated loss of \$10,000. A large house will be erected immediately.

A cyclone at Dodge Center, Minn., September 22, carried away one end of Harding's elevator and the roof of Warren Fairbank's grain warehouse.

Kirk & Co.'s large grain establishment at North End, O. T., was destroyed by an incendiary fire September 17 which destroyed most of the town.

The Henning Elevator at Cayuga, Ill., was burned September 26, together with 18,000 bushels grain. Total loss estimated at \$8,000; total insurance \$4,000.

The Greenwood grain warehouse at Chico, Cal., containing 24,000 sacks of grain, was destroyed by fire September 14. Loss partially covered by insurance.

The storage house of the Anheuser-Busch Brewing Association of St. Louis, Mo., at Laredo, Texas, was destroyed by fire September 23. Loss \$3,000, with \$1,500 insurance.

About nine tons of hay, piled up before the store of the Western Hay and Grain Company at Omaha, Neb., were burned recently. The loss was about \$40, which was covered by insurance.

The Monarch Elevator Company's elevator at Grand Bend, N. D., was burned recently, together with about 4,000 bushels of wheat. Another house of 35,000 bushels' capacity will be built immediately.

Smith's elevator at Portage la Prairie, Manitoba, narrowly escaped a destructive fire recently. A pass-

er-by happened to see the blaze, which had started in the flour near an elevator spout, and extinguished it in time.

A section of a large warehouse at mill "A," owned by the Camp Spring Milling Company at Nashville, Ill., collapsed on August 27. About \$1,000 worth of flour in barrels, which was stored in that part of the warehouse, was ruined.

E. S. Tuttle's elevator at Norwalk, Ohio, was destroyed by fire September 23. The Home County Banking Company's loss on the building is \$3,000, insurance \$1,500, and Mr. Tuttle's loss on the contents is \$7,500, insured for \$5,000.

Wilson's elevator at Henning, Ill., was destroyed by fire September 26. It had a capacity of 60,000 bushels, and the fire destroyed 17,000 bushels of oats, 200 bushels of wheat, and 300 bushels of corn. The loss is partially covered by an insurance of \$4,000.

Wm. G. Bain, superintendent of the Miller Grain and Elevator Company of St. Louis, Mo., committed suicide October 4 by shooting himself. The only known cause for the act was that he suffered from a chronic painful disease and took that method for relief. He was born in Dumbarton, Scotland, and was 54 years old.

Alexander K. Shaw, for thirty years a speculator on the Chicago Board of Trade, committed suicide October 7 by taking morphine. He had met reverses during the last two years from which he saw only one escape. "Andy" Shaw was the wit of the 'Change and a genial man and popular character. He was born in Caledonia, N. Y., fifty-nine years ago. He came to Chicago in 1860 and entered the grain business.

Cargill Bros', elevator at Addison, N. D., a small station on the Great Northern road, collapsed recently, burying E. T. Tubbs, the agent in charge, and his helper, in the debris. They were smothered to death before aid could be given. Collapsing elevators seem to be on the increase, and if we have to learn the kind of risk we run in having a house built by country barn builders we have it now. Only legitimate architects and builders should be employed for such responsible work.

The Pacific Coast Elevator at Portland, Ore., was destroyed by fire September 23 together with the contents, 300,000 bushels of grain. An adjoining warehouse and cars belonging to the Oregon Railway and Navigation Company, and containing 55,000 bushels wheat, were also destroyed with other property. The total loss is \$1,500,000; total insurance \$500,000. The fire started in the docks. The Pacific Coast Elevator Company intends to erect a new 25,000-ton elevator, for which bids are being received.

OBITUARY

J. H. Whitaker, a grain dealer at Pewamo, Mich., is dead.

Charles Disturnel, grain commission merchant at New York City, died recently.

Edward Bailey, formerly a grain and flour commission dealer with Rice, Quinby & Co. of New York City, died recently. A new company will carry on business under the same firm name.

P. R. Williams, a pioneer of Wisconsin and an old-time grain man, is dead. He settled in Neenah, Wis., in 1856 and in 1860. He was born in Exeter, N. Y., in 1808, being 86 years old at the time of his death.

Mountford S. Andress of the Chicago Board of Trade firm of West, Andress & Co., died September 30 at the age of 59. Mr. Andress went to Mendota, Ill., in 1850 and in 1866 became identified with the firm of which he was a member at his death. He leaves a wife and two married daughters.

Albert H. Walcott, a member of the Chicago Board of Trade for many years, died October 4 at the age of 59. For the last nine years he had been employed as cash grain clerk in the office of E. W. Bailey & Co. He came from Detroit here and at once entered the office of the firm with which he had been ever since.

James F. Gillette, an old and successful Board of Trade man of Chicago, died suddenly September 18, of heart failure. He was born in Suffield, Conn., Aug. 7, 1832. He came west at the age of 21, and in 1859 settled in Chicago and formed a partnership with A. E. Kent. The firm changed later to Cooley, Dwight & Gillette, and still later to Dwight & Gillette. Six years ago Mr. Gillette retired from active business life.

Months ago someone started in to corner the wheat market at San Francisco. L. F. McLaughlin has been engineering the deal, the result of which is 200,000 tons of May wheat the first cost of which was \$1,000,000 more than the price it now commands. The probabilities are someone will lose more than that, but who that may be is a matter of conjecture. Senator Fair is credited with being a heavy loser in the deal.

ITEMS FROM ABROAD

Russian flax producers will hold a fair, or convention, at Smolensk November 15.

The Russian Minister of Finance has approved the scheme for the creation of a Grain Exchange at St. Petersburg.

Italy's wheat crop of this year is officially estimated at 1,800,000 quarters (of 480 pounds each) less than the yield of 1893.

During the month of August France imported wheat and flour to the amount of 182,000 quarters (of 480 pounds each).

Reports from Great Britain indicate that the hay crop will yield about 20 per cent. above an average crop from a largely increased acreage.

German barley exporters are said to be expecting a good trade during the current season with English and Scotch ports. The eastern provinces of Prussia have harvested a very good crop.

During the month of August the United Kingdom imported 18,880 tons of hay against 14,917 tons in July; and during the seven months from January 1 to August 31 the importations amounted to 218,560.

Revised official statistics of Victoria, Australia, show the exact acreage of the wheat crop to have been 1,469,359, and the total product 15,255,200 bushels, compared with 14,814,645 bushels in the preceding season.

During the 37 weeks from January 1 to September 15 Argentina exported 6,287,000 quarters (of 480 pounds each) of wheat, against 3,654,000 quarters during the same period of 1893.

Brazil has announced the abrogation of its reciprocity treaty with the United States. This means the probable cessation of the import of flour from this country and increased importations of wheat from Argentina.

From Jan. 1 to Sept. 22, 1894, Australia and New Zealand exported wheat and flour combined to the amount of 994,000 quarters (of 480 pounds each), against 1,049,000 quarters during the same time in 1893, 601,000 quarters in 1892, and 1,206,000 quarters in 1891.

Official estimates place the wheat crop of France at 41,700,000 quarters (of 480 pounds each), and the acreage at 17,210,000. In 1893 the yield amounted to 34,800,000 quarters. The average yield for the five crop years from 1889-90 to 1893-94 is 36,000,000 quarters, and the average net imports during the same time was 6,700,000 quarters.

The Mexican Produce Exchange at the city of Mexico petitioned the government to induce the railroad lines entering the country to reduce freight and grain rates. This movement is probably the outgrowth of the threatened corn famine, but as at least fair crops now seem assured it is doubtful if the petition will be pressed or the request granted.

During July Norway imported 75,000 quarters (of 480 pounds each) of rye, and 37,000 quarters of barley, against 49,000 and 17,000 quarters in July, 1893; and from August, 1893, to July, 1894, it imported 760,000 quarters rye and 535,000 quarters barley. During July Norway exported 500 quarters of oats, against 2,100 quarters in July, 1893; and from August, 1893, to July, 1894, it exported 14,000 quarters.

The United States Consul at Argentina reports that the increase in the acreage of wheat of that country is about 20 per cent. over the crop of 1893, but that the yield will probably not be so large, the amount for export next year showing, therefore, only a slight increase. The report says: "The most careful observation as to the price received at different points and at different dates leads me to believe that the producer has received for his last wheat crop, now being sold, an average of 37 cents per bushel gold."

The statistics of the past three years would appear to prove that the high duty is discouraging the consumption of wheat in France: for whereas the annual consumption formerly averaged nearly 43,000,000 quarters (of 480 pounds each), it has now fallen slightly under 41,000,000 quarters for three years. One theory is that the 1891 crop was far bigger than was officially estimated, and that in reality the total supplies of the past three years, native and foreign, greatly exceeded 41,000,000 quarters per annum.—*Corn Trade News*.

During the month of August Sweden imported 92,000 quarters (of 480 pounds each) of wheat, against 51,000 in the same month of 1893, 47,000 against 13,000 quarters rye, 10,000 against 1,500 quarters barley, 200 against 3,500 quarters maize, 21,000 against 19,000 sacks flour, and 17,000 against 8,000 sacks rye meal. During August the exports, compared with the same month of 1893, were 33,000, against 45,000 quarters oats, 40 against 500 quarters barley, 20 against 15 quarters wheat, 150 against 200 quarters rye, 200 against 250 sacks flour, 5 against 30 sacks rye meal.



Memberships on the Duluth Board of Trade recently sold at \$140 to \$150 each.

Tickets of membership to the New York Produce Exchange are held at \$475.

The clearing house in connection with the Baltimore Corn and Flour Exchange was opened October 1.

The Milwaukee Chamber of Commerce has finally decided not to purchase the building it is at present occupying.

The Vicksburg (Miss.) Cotton Exchange and Board of Trade has called an interstate convention in the interest of an anti-option bill to meet in that city November 20.

Murry Nelson of the National Elevator Company has begun a mandamus suit against the Chicago Board of Trade to compel that body to reinstate him to membership.

At a meeting of the Grain and Cotton Exchange of Richmond, Va., resolutions were adopted advocating the extension of Norfolk & Western Railroad into that city and the establishment of a freight traffic bureau.

The annual election of officers of the Cincinnati Chamber of Commerce resulted as follows: President, James M. Glenn; vice-president, William McCallister; treasurer, Albert Lackman; secretary, C. Lee Williams; directors, J. P. Gale, Talton Embry, N. J. Hoban, F. M. Huschart, T. P. Wiggins.

At a meeting of the Duluth Board of Trade an amendment to Section 1 of Rule XVI of the general rules and by-laws was adopted. The amendment was to the effect that, "On all deliveries upon contract for grain made on and after Sept. 13, 1894, the regular or customary charge to follow such warehouse receipts shall be $\frac{1}{2}$ cent per bushel."

A grain trade congress will be held at New Orleans in November. The congress will be held under the auspices of the Board of Trade, and an effort will be made to promote the interest of the port of New Orleans as an outlet for grain, so that the great number of Western shipments now going to Eastern ports may be diverted to that point.

A committee of the Indianapolis Board of Trade appointed to consider whether the rules by which grain is inspected at that city should be enforced has made a report reversing the decision of Inspector Dunn, in regard to a carload of corn which had been appealed from. The inspector was instructed to continue his work in strict conformity with the rules of the board.

The Pittsburg Grain and Flour Exchange has decided that bids and offers made at the sessions of the Exchange on wheat, corn, etc., shall not be accessible to the press for publication. The benefits that may accrue from such an action are very dubious. Out-of-town shippers will not know the ruling prices of the Pittsburg market and have to rely on the prices the town dealer sees fit to quote, while on the other hand the publication of unreliable quotations which do not represent actual market transactions will cease.

A petition has been presented to the Merchants' Exchange at St. Louis, Mo., praying for an amendment to the rules permitting the delivery of No. 2 Hard Wheat on all contracts for future delivery of No. 2 Red Winter. It is suggested that this amendment would benefit the trade by drawing No. 2 Hard to that market, where it is in good demand for milling and export, which now goes to competing markets where facilities for making regular contracts for future delivery are offered. The millers are making strenuous objections to such a plan, saying they do not want No. 2 Hard on future contracts.

The Chicago Board of Trade has suspended Murry Nelson, president, and J. B. Wayman, secretary and treasurer, of the National Elevator and Dock Company, on the charge of uncommercial conduct and violation of agreement. Mr. Wayman signed the agreement which settled the dispute between the elevators and the Board of Trade some time ago in the absence of Mr. Nelson, who denied his authority to do so. The board ordered a reduction in storage rates and the installation of an inspector and supervisor, and the adherence to rules for all regular elevators. Mr. Nelson declined to keep to his agreement and has filed a bill in the courts to determine the authority of the Board of Trade to make his elevator irregular.

Members of the Kansas City Commercial Exchange made merry with the rest of humanity at the recent carnival festivities at that city. In the parade they represented themselves "after their kind." A bear proudly rode in a cart decorated with grain and drawn by a rather jaded and disreputable looking bull. On the bull's back was a banner bearing the legend: 'Price of Wheat in 1892, \$1.10; Price of Wheat in

1894, 35 cents. And the bears still drive me on." Members of the Exchange rode in hacks driven by bears headed with the device: "We Shipped Our Grain to the Kansas City Market," while the unfortunate individuals who did otherwise were represented as languishing in an immense soup-bowl with a kicking machine attachment.

NEW WAREHOUSE AT BALTIMORE.

Baltimore, Md., opened its large terminal warehouse to the shipping public last month, and the first firm to take advantage of the facilities afforded was Thomas S. Clark & Son, grain and flour commission merchants, who stored a carload of clover seed. The warehouse is built of brick and granite, is six stories high and 95x186 feet in size. The building is made as nearly fireproof as possible, has double flooring interlaid with asbestos and all masonry laid in cement. This warehouse is a model of its kind and the first to be erected south of Philadelphia. Similar institutions in other cities would greatly facilitate shipping, and are all too rare.

The building has a capacity of 75,000 barrels of flour and offers facilities for storing besides hay, grain and general merchandise at a small cost. Flour is unloaded and loaded and given 10 days' storage free, other goods are offered 5 days' free storage, regular rates to be charged thereafter. Each story is 11 feet in height, the different floors being divided into sections for more convenient storing. There are three hydraulic elevators, the machinery for which is in the basement. The steam plant and pumping machinery are in a detached building. On the ground floor two railroad tracks enter the building beside a wide platform, and there is also a driveway for wagons.

The Terminal Warehouse Company of Baltimore was incorporated in June, 1893, for the purpose of establishing storage warehouses, with a capital stock of \$15,000. The officers of the company are: Robert H. Powell, president; Robert M. Wylie, vice-president, and Samuel W. Lippincott, secretary and treasurer. The directors are Henry James, Robert M. Wylie, George C. Wilkins, Charles England, John L. Rogers and Robert H. Powell.

SEED EXPORTS AND IMPORTS.

Seeds valued at \$75,707 were exported during August, according to the report of the Bureau of Statistics, against an amount valued at \$292,404 in August, 1893; and during the eight months ending with August seeds valued at \$1,944,327 were exported, against an amount valued at \$1,646,010 exported during the eight months ending with August, 1893.

Clover seed amounting to 309,306 pounds was exported in August, against 576,869 pounds in August, 1893; and during the eight months ending with August 14,284,675 pounds, valued at \$1,409,740 were exported, against 3,253,995 pounds, valued at \$410,227, exported during the corresponding months ending with August, 1893. Cotton seed aggregating 44,800 pounds was exported in August, against 31,800 pounds in August, 1893; and during the eight months ending with August 4,234,090 pounds, valued at \$32,808, were exported, against 2,039,251 pounds, valued at \$21,523, exported during the eight months ending with August, 1893.

There were 401 bushels of flaxseed or linseed exported in August, against 160,625 bushels in August preceding; and during the eight months ending with August 13,077 bushels, valued at \$15,254 were exported, against 543,608 bushels, valued at \$639,938, exported during the eight months ending with August preceding.

Timothy seed aggregating 85,843 pounds was exported in August, against 113,186 pounds in August preceding; and during the eight months ending with August 5,399,338 pounds, valued at \$243,456, were exported, against 5,440,050 pounds, valued at \$436,802, exported during the corresponding months of the year preceding. Other seeds aggregating an amount valued at \$41,250 were exported during August, against an amount valued at \$22,953 in August preceding; and during the eight months ending with August other seeds valued at \$242,799 were exported, against an amount valued at \$137,520 exported during the corresponding months of the year preceding.

Flaxseed aggregating 51,959 bushels, valued at \$46,359, was imported during August, against 31,593 bushels, valued at \$34,913 in August preceding; and during the eight months ending with August 531,275 bushels, valued at \$628,522, were imported, against 127,701 bushels, valued at \$159,062, imported during the eight months ending with August preceding. Other seeds valued at \$40,642 were imported during August, against an amount valued at \$9,117 in August, 1893; and during the eight months ending with August other seeds valued at \$224,823 were imported, against an amount valued at \$328,501 imported during the corresponding months ending with August, 1893.

Grain shovellers at Buffalo, N. Y., are divided into two factions, and a strike hangs fire. If employees of one union are not discharged the other union will strike—and vice versa.

Latest Decisions.

The Nature of Stoppage in Transitu.

Considerable misapprehension exists with regard to the nature of stoppage in transitu. It does not restore title, but only possession. Or, as the Supreme Court of Alabama explains (Wolf vs. Shepherd, 15 So. 519): When the seller of goods lawfully exercises the right of stoppage in transitu, the possession is thereby restored to him, with the right to detain the goods until the price is paid. Upon the exercise of the right, the possession of the carrier becomes the possession of the seller, and the latter may even maintain an action against a sheriff, who, with notice of his rights, takes the goods from the custody of the carrier, and converts them, under attachment against the purchaser.

Invalidity of Representations Made After Sales Are Made.

It is not infrequent that buyer and seller will talk over a transaction after it is closed. The former will, in one way or another, exact new assurances, and the latter will give them. These, however, it should be remembered, are, for the most part, without any legal value. As the Supreme Court of Kansas says (Farmers', etc., vs. Scott, 36 Pac. 978), representations made by a seller to a buyer after a contract of sale has been consummated are not actionable. There is no consideration for the same. They do not offer any inducement to a purchase already made. Such representations, made after the sale, could not have been relied upon by the purchasers, or have been any inducement to the sale.

Railroad—Consignment—Loss.

The Appellate Court of Indiana held, in the recent case of the Lake Erie & Western Railway Company vs. Condon, that where by the terms of the bill of lading a railroad company's duty is simply to carry safely and deliver to the succeeding carrier, it is not liable for loss occurring off its line; that an overcharge by the carrier from the consignee, who deducted it from the price of the goods, can be recovered by the consignor with whom the carrier had contracted to carry the goods for a reasonable reward to be paid by him, and that it is unnecessary in a complaint for overcharges to negative all the sources from which the carrier might have acquired a rightful claim against the plaintiff.

Telegraph Company—Liability.

The Supreme Court of Georgia held, in the recent case of Mathis vs. Western Union Telegraph Company, that the Georgia statute imposing upon telegraph companies a penalty for default in the transmission or delivery of messages is based upon public policy, and has for its object the quickening of the diligence of these companies in the performance of their duties to the public; that with this object in view, it seeks to encourage both the sender and sendee of messages to sue for the penalty, by offering to the one who shall first sue the whole amount of the recovery; that for a company to protect itself against the payment of the penalty by a contract with the sender, made at the time of receiving from him the message to be sent, that it will not be liable unless a claim for the penalty is presented to it or its agents in writing within sixty days after the message is filed for transmission, would be contrary to the policy of the legislature in enacting the statute, and that all such contracts are void and of no effect.

Options—Agent—Pay for Services.

Justice Miller has recently rendered an interesting decision in the Circuit Court of the United States for the Western District of Wisconsin in a suit growing out of speculations in domestic product in the city of Chicago upon "margins." It was brought by the firm of Smith & Lightner, brokers, against their customer, John H. Rantree, to recover balance alleged to be due them on account of purchases, sales of pork, lard, wheat, etc., made by his order. Rantree set up the defense that brokers had not actually bought and sold for him the commodities specified, but merely speculated in "options" on his account; that these "options" were nothing but gambling contracts or bets on future prices of various articles of produce to which they related; that they were not designed to be actually performed by delivery, but differences were to be adjusted and payments made and accepted according to differences between the contract price and the market price at the date fixed for delivery; and that finally these contracts were illegal and void. This court holds that evidence of what other people intended by other contracts of a similar character, however numerous, is not sufficient of itself to prove that parties to these contracts intended to violate the law or to justify a jury in making such presumption. "It is also to be observed," the court says, "that the plaintiffs in this case are not suing on the contracts, but for services performed and money advanced for defendant at his request; and though it is possible

that they might under some circumstances be so connected with the contract as to be affected by it, they are certainly not in the same position as the party suing for the enforcement of the original agreement." Judgment of the Circuit Court in favor of brokers is affirmed with interest.

Power of Discharged Agent.

In reply to the question, Has an agent any power, after he has been discharged, to further bind the person who employed him? the *Business Law Weekly* says: Unless sufficient notice of the discharge of the agent is given, any contract made with him, after the revocation of his authority, will bind his principal the same as before. Personal notice of some kind is required in the case of those who have had previous dealings with the agent, while an advertisement will be sufficient for others. Persons who did not know of the agency during its existence need no notice of its discontinuance.

Liability of Person Taking Money for Insurance.

It is generally best for the owner of insurable property to himself see to its insurance, or at least to see that it is properly done. But there are occasions when, for one reason or another, this matter is intrusted to others. If it is left to an insurance agent, the company he represents may be liable for his neglect of duty, but where he is the agent of numerous insurance companies, and he does not disclose which one he will represent in this particular transaction, he will probably alone be responsible until the insurance is placed, or he has done his duty toward placing it. Generally, the Supreme Court of South Dakota holds (*Lindsay vs. Pettigrew*), a person who takes money belonging to another, under an express agreement to procure insurance, and unjustifiably fails to secure the same, or make an effort in that direction, thereby assumes the risk, and becomes liable, in case of loss, to pay as much of the same as would have been covered by the insurance policy for which such person has paid, provided the same had been procured as directed.—*Business Law Weekly*.

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DAVIS GRAIN TABLES.—These tables give the value

of any number of bushels of produce weighing 60 pounds to the bushel from 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table, which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds' dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price.....\$1.25

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ROPES COMMERCIAL CALCULATOR.—A small manual in compact form which contains a new system of useful and convenient commercial tables. Also a "Practical Arithmetic for Practical Purposes" in which is embodied the shortest and simplest rules and methods known. It includes in its contents a table giving the value of cattle, hogs, flour, etc., for any amount ranging from 3 to 20,000 pounds, and in price from \$2 50 to \$6.75 per 100 pounds. It contains a table which shows the equivalent of English market quotations from 1 to 100 shillings in U. S. money. It also shows the freight on grain per bushel from 1 to 50 cents per 100 pounds. The grain tables show the number of bushels and odd pounds in any quantity of any kind of grain from 10 pounds to 100,000 pounds. The hay, straw and coal tables show the value in tons of any amount ranging from 10 to 3,000 pounds at prices from 25 cents to \$18 per ton. The interest tables are very complete and give the interest for any amount for any time and for any rate per cent, ranging from 6 per cent. to 10. The millers' and farmers' exchange table gives the number of pounds of flour to be received from wheat ranging from 5 to 3,000 pounds and from 25 to 40 pounds to the bushel. Tables of money weights and measures are also included, and also the metric system. The book contains much other useful information. Price.....50

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BILLS OF LADING RELEASES.

Bills of lading usually contain clauses intended to release the carriers from one or more forms of liability. One, for example, had the words: "It being further expressly agreed that this company assumes no liability, and it is not to be held responsible, as common carriers, for any loss or injury to said property after its arrival at its warehouse aforesaid, or for any loss or damages thereto or any delay in transportation or delivery thereof, by any connecting or succeeding carrier."

Conceding, said the Supreme Court of Minnesota (*Wehmann vs. M. St. P. & S. M. Ry. Co.*), that the validity of the clause was to be determined by the principles of the common law, then the question arose, was there a consideration to support it? Such a clause, to be of force, must stand as a contract between the shipper and the carrier, and, as in the case of all contracts, there must be a consideration for it. One exercising the employment of a common carrier of goods is bound to receive and carry such (within the class of goods he carries) as are tendered to him for the purposes, and, in the absence of special contract, to carry them with the full common law liability of a common carrier. His receipt of and undertaking to carry them, being a duty imposed on him by law, is not a consideration to support such special contract. There must be some other. That is generally furnished by some concession in rates. And, where the agreement is set forth in the contract for carriage, it would probably be presumed that, in a case where parties could make any, there was some such concession as a consideration for relieving the carrier of part of his common law liability. But no abatement or concession in rates will be presumed as such consideration where such abatement is forbidden by law. In the case of interstate shipments any abatement of rates is forbidden by act of Congress, and therefore none can be presumed.

In this instance the tariff of rates made no mention of any limitation of liability, and, the court held, were to be taken, therefore, as rates established for carriage with full common carrier's liability; that under the act of Congress no abatement could be made to support a contract for a limited liability and that the clause was void for want of a consideration to support it. Here is certainly a very important principle brought out, which it is doubtful if many shippers have understood.—*Business Law Weekly*.

LATE PATENTS

Issued on September 11, 1894.

BALING PRESS.—Guernsey W. Davis and George A. Davis, Fairfield, Ark. No. 525,841. Serial No. 471,047. Filed April 19, 1893.

GRAIN METER.—Frederick W. Kanne, Waterville, Minn. No. 525,764. Serial No. 437,999. Filed June 25, 1892.

GRAIN METER.—Frederick W. Kanne, Waterville, Minn. No. 525,765. Serial No. 481,219. Filed July 22, 1893.

GAS ENGINE.—James McGeorge, Cleveland, Ohio. No. 525,857. Serial No. 488,900. Filed Oct. 23, 1893.

AMMONIACAL GAS MOTOR.—Patrick J. McMahon, Tangipahoa, La., assignor to the Standard Fireless Company, Chicago, Ill. No. 525,859. Serial No. 414,811. Filed Dec. 12, 1891.

FEED GRINDER.—Thomas Cascaden Jr., Waterloo, Iowa. No. 525,976. Serial No. 512,292. Filed May 24, 1894.

DRIER.—Thomas Craney, Bay City, Mich. No. 525,758. Serial No. 501,118. Filed Feb. 23, 1894.

HULLING AND CLEANING MACHINE.—Chas. E. Lipe, Syracuse, N. Y., assignor to the Engleberg Huller Company, same place. No. 525,813. Serial No. 499,810. Filed Feb. 10, 1894.

Issued on September 18, 1894.

BALING PRESS.—Julius A. Spencer, Dwight, Ill. No. 526,060. Serial No. 511,749. Filed May 19, 1894.

Issued on September 25, 1894.

CONVEYOR.—Chas. W. Miller, Columbus, Ohio, assignor to Joseph A. Jeffrey, same place. No. 526,405. Serial No. 415,283. Filed Dec. 16, 1891.

GAS, OIL OR SIMILAR MOTOR ENGINE.—Henry H. Andrew and Alfred R. Bellamy, Reddish, near Stockport England. No. 526,369. Serial No. 503,505. Filed March 13, 1894. Patented in England Nov. 17, 1892.

HAY PRESS.—James N. Eastwood, Kansas City, Mo. No. 526,441. Serial No. 492,035.

COMBINED GRAIN CLEANER, FANNING MILL AND ELEVATOR.—James F. Hatfield, Dublin, Ind. No. 526,623. Serial No. 497,178. Filed Jan. 17, 1894.

Issued on October 2, 1894.

GAS ENGINE.—Carl F. Hirsch, San Francisco, Cal. No. 526,837. Serial No. 463,102. Filed Feb. 20, 1893.

BALING PRESS.—Andrew Wickey, Chicago, Ill. No. 526,883. Serial No. 464,592. Filed March 3, 1893.

Issued on October 9, 1894.

ELEVATOR.—John W. Seaver, Allegheny, Pa. No. 527,295. Serial No. 496,429. Filed Jan. 10, 1894.

TRADEMARKS.

CLOVER SEED.—Gillett & Hall, Detroit, Mich. Filed

G. & H.



Sept. 10, 1894. The representation of an acorn and the letters "G & H." Used since October, 1891.

The conversion of wheat into pork is becoming considerable of an industry in different parts of the West. A Missouri stock grower who fattened a bunch of hogs on wheat kept a careful account of the grain which he fed and the price which he received for his pigs, and he discovered that by using it for feed he realized \$1.50 a bushel on wheat which he could not have sold in the market for more than 45 cents a bushel.

PRESS COMMENT.

SHIPPING GRAIN DIRECT.

Shipping grain direct from country stations to the big distributive markets such as Chicago, Toledo and Duluth, is more common than formerly. Even now the question is imperfectly understood, and at both ends of the line there are frequent evidences of confusion. The matter of weights often causes a dispute and on this point Minnesota probably has the most simple and effective law.—*American Agriculturist*.

SHORTAGES AT CHICAGO.

Shortages which occur so frequently when unloading at the Chicago tracks, do not result, as so many shippers imagine, from a force of habit on the part of the local receiver in cabbaging sufficient hay to make up for the notoriously insufficient commission which he obtains in this market. This impression is wrong, however; the thieves who get away with the hay are evidently among the individuals connected with railroad companies who have access to the cars before they are finally turned over to the legitimate receivers.—*Hay There*.

THE BUFFALO ELEVATOR TRUST.

Was there anything worse in the robber barons of the middle ages levying a tribute upon all who passed their castles, than the conduct of the Buffalo elevator trust exacting its heavy toll upon all Western wheat going to the seaboard? They have recently raised their toll from $\frac{1}{2}$ to $\frac{3}{4}$ of a cent a bushel. There are 30,000,000 bushels of wheat in Chicago awaiting shipment, and this raise of toll will put \$225,000 into the pockets of the Buffalo banditti. The people must fight these trusts to the death or they will be the death of the people.—*Journal, Muscatine, Iowa*.

ROUTING SHIPMENTS.

Among the practices in the conduct of railway business properly the subject of reform, the direction of routing seems to be important enough to demand immediate attention. The naming of a through rate should be conditioned upon the right to direct the route, and it should be understood by shippers that if they wish to designate the particular roads over which their property is to be transported, they must pay the local rates in force on the several lines between termini. The initial road naming a through rate has an undoubted right to control the routing of the freight, and it should exercise that right.—*Railway Review*.

GRAIN ELEVATORS COMBINE.

The competition between the stationary elevator combination and the floating elevators at Buffalo has come to an end, and charges for transporting grain from lake vessels to canal boats advanced from $\frac{1}{2}$ to $\frac{3}{4}$ of a cent. This includes ten days' storage, whether desired by shippers or not. In other words, the Buffalo elevator monopoly is back just where it was before the war on floaters began last spring. Advices do not indicate on what terms the floating elevators were taken into the combination. The immediate effect of the advance in transfer charges was to temporarily stop shipments by way of the canal, but it is expected that the general shipments will soon resume again.—*Marine Record*.

ST. LOUIS INSPECTION FEES.

Now that the St. Louis Merchants' Exchange has declared its position with regard to grain inspection and weighing fees, and Chief Grain Inspector O'Shea has indicated the position he will maintain in the proposed controversy, one may be excused for venturing an opinion on the subject. It seems to be agreed that the grain inspection and weighing service rendered by the state department is satisfactory. This is an important point and we are glad it does not enter into the controversy. The shipper pays it, but St. Louis merchants fear that, having to pay more for such services in St. Louis than he would in Chicago or some Eastern market, the shipper might be induced to divert grain naturally tributary to the St. Louis market.—*Modern Miller*.

RAILROADS SHOULD FURNISH TERMINAL FACILITIES.

The grain receivers and shippers of Chicago demand that the railroads shall furnish them with terminal facilities for the handling of grain or flaxseed in this city that will not subject their business to the scrutiny of competitors who manage the public grain elevators. Under present arrangements the company managing the terminal elevator takes possession of all grain and flaxseed that is consigned to other receivers on that line, and it handles the freight bills containing the names of shippers at the point of shipment. Similarly on shipments east made by others the elevator company has the advantage of knowing the kind, grade and quantity forwarded and has the opportunity of filling the consignment with the poorest kind of grain while retaining the better qualities in the different grades for its own customers.—*Chicago Tribune*.

EXORBITANT ELEVATOR RATES DRIVE GRAIN FROM BUFFALO.

At present there are sixty storage, tower and floating elevators in Buffalo. Everyone is in the Buffalo Elevator Trust, and it is an open, everyday expression in Buffalo, that ten elevators could elevate more grain than ever came to Buffalo in any one season. However, the trust levies a toll on canal grain sufficient to pay princely dividends on the fifty idle, useless elevators. They recently advanced the rate for elevating grain seven-eighths of one cent a bushel, which has exasperated grain speculators to the extent that very little grain is shipped to Buffalo. Consequently about three hundred canal boats are massed at the Queen City waiting for cargoes. Worse yet, the great free Erie-Hudson Waterway is rendered comparatively useless. The only remedy and salvation for the Erie boatmen is to combine, and either buy or build one or two slashing good elevators.—*Canal Defender*.

PERSONAL.

Silas Barnes has taken charge of the elevator at Dennison, Iowa.

Mr. Guy Campbell has obtained a position at Whitehall, Wis., with Cargill Bros., grain dealers.

L. M. Abbott has been appointed manager of Hubbard & Palmer's elevator at Mankato, Minn.

Mr. M. Low is now buying wheat for the Orondo Shipping Company at Fallon's Station, Wash.

P. H. Kershaw, of the West Coast Grain Company at Tacoma, is making a tour through the Big Bend and Palouse districts in Washington.

Mr. Bert Peck, who has for the past five years been engaged in the grain business at Spokane Falls, Wash., recently returned to his former home at Rochester, Minn.

Gen. G. L. Becker has resigned his position as a member of the State Board of Railroad and Warehouse Commissioners to run for the governorship of Minnesota.

B. P. Hutchinson, or "Old Hutch," a man who has manipulated the markets to the tune of millions, is again in business in Chicago, retailing "Good cigars at 1 cent apiece."

E. N. Bradley, formerly manager of F. H. Peavey's elevator at St. Joseph, Minn., has accepted the position of general manager of the Duluth Elevator Company at Duluth, Minn.

H. H. Corson, formerly a member of the firm of Dunwoody & Corson, New Richland, Minn., is now traveling for the Barnum Grain Company, with headquarters in Minneapolis.

James Statler, one of the prominent business men of Good Hope, Ill., has been in the grain business at that place since 1876. He now controls two large elevators besides his other mercantile business.

E. N. Osborne of the Osborne & McMillan Elevator Company was married September 13 to Miss Emma W. Commons, daughter of the well-known grain man. Mr. and Mrs. Osborne have gone on a visit to New England.

Fred L. McMullen, successor of the late N. C. Simons in one of the oldest grain houses of the Board of Trade of Buffalo, N. Y., was married to Miss Clara Luckow September 19, and has taken his bride on a trip to the East.

L. G. Fisher, formerly with the Minneapolis and Northern Elevator Company, has been appointed secretary of the Union Elevator Company, succeeding Mr. George Barwise, who is now representing the millers on 'Change in Minneapolis.

C. W. Roozer has been elected superintendent of the Nashville Warehouse and Elevator Company at Nashville, Tenn., W. M. McCarthy having resigned. Mr. Roozer's former position of assistant superintendent and bookkeeper will be filled by M. K. Peck, formerly with Buckner & Co.

L. S. Hogeboom, traveling representative of The Knickerbocker Company, fell into the hands of Philistines recently while sleeping at the home of a friend in Chicago. He was chloroformed and robbed of his gold watch, chain and charm and his money. The burglars were discovered while making away with Mr. Hogeboom's clothing, which they considerably left behind them. The matter was reported to the police, but none of the property was recovered.

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

GRAIN REPORT OF E. P. BACON & Co., Milwaukee, Wis., October 12.—WHEAT.—Everybody knows that this market has been much higher than Chicago on all grades of spring wheat for a number of years past. This is on account of our large milling trade here; but now we are higher than Chicago on winter wheat of all descriptions. This is very unusual, but it looks as though this condition of affairs would continue through this crop. The large stocks at Chicago, and small stocks and active milling demand here is what makes it. On the regular market our December price to-day closes at 54 cents against 53 cents at Chicago. Sample Wheat ranges from 52@54 cents on track for No. 3 Red; 54 cents for No. 2 Red, and 55@57 cents for No. 2 Hard Winter. Spring wheat by sample is very scarce at 61½ cents for No. 1 Northern, and 56@60 cents for off grades, according to quality. OATS.—Receipts of oats have been large and the market has declined some, but there is an active shipping and local demand at current prices. No. 3 White 31@31½ cents; No. 2 White 31½@32 cents. CORN.—Receipts have been very light and a sharp local demand exists, prices ranging from 51@53 cents, according to quality.

GRAIN REPORT OF SHANKS, PHILLIPS & Co., Memphis, Tenn., October 13.—During the past 30 days there has been practically no change in value of hay in this market, the demand still being confined chiefly to the better grades. The movement is reasonably large, the supply being furnished almost exclusively by states west of Mississippi river. Quotations to-day are as follows: HAY.—Choice Timothy \$12.00; No. 1 Timothy \$11.00; No. 2 Timothy \$10.00; Choice Clover Mixed \$11.50; No. 1 Clover Mixed \$10.50; No. 2 Clover Mixed \$8.50@9.00. Choice Kansas Prairie \$9.00; No. 1 Kansas Prairie \$8.00; No. 2 Kansas Prairie \$7.00; Choice Arkansas Prairie \$6.00. CORN.—Nothing doing. Old No. 2 White nominally 53 cents; No. 2 Mixed 51 cents. The abundant yield of this section is beginning to move at unsettled prices, ranging from 40 to 45 cents for local consumption. Lower prices looked for. OATS.—No. 2 White 35 cents; No. 3 White 33½ cents; No. 2 Mixed 32 cents; No. 3 Mixed 31 cents. Demand active, and likely to continue so. WHEAT BRAN.—Large sacks \$12.50; small sacks of 100 pounds \$12.75. Demand good. WHEAT.—No. 2 Red Soft Winter 50 cents, in fair request. FLOUR.—Winter Wheat Patent \$2.45@2.55; Extra Fancy \$2.10@2.20 in wood. Lower grades not salable. Market very heavy, and in buyers' favor. Movement light and pressure to sell is general.

GRAIN REPORT OF THE MOFFATT & LEE COMMISSION CO., Kansas City, Mo., October 12.—The past month has been a discouraging one to Kansas City grain men. There has been practically nothing done in corn, as the old crop is about exhausted, and the new crop has hardly commenced to move; prices, at present, of No. 2 corn in this market ranging around 47 cents. The territory that has usually shipped its wheat to Kansas City has been supplying Kansas mills and the new element (that has created so much encouragement to the bulls), namely, the "Feeders;" and the consequence is that our receipts have been abnormally light, notwithstanding the fact that prices realized here are entirely out of line with any market in the East. No. 2 Hard Wheat has gradually worked its way up to, and above, a parity with Soft Wheat, and is now selling in this market at 50 cents, and a very choice No. 2 Red or Soft Wheat can be bought for 3½ cents per bushel less. Elevators here have had no encouragement to mix wheat, as the prices of low grades of wheat are so close to the price of No. 2; oftentimes not a cent a bushel difference between the grades. This condition of the market has been brought about mostly by the demand of the Iowa feeders, which have taken large quantities of our low grade wheat. Oats have been fairly steady during the past month, prices ranging from 29 to 30 cents for No. 2 Mixed Oats. As we are receiving no oats from Nebraska this year, there has been no White Oats, to speak of, offered. We look for a better movement of grain all along the line, commencing about the 15th of this month.

GRAIN REPORT OF L. NORMAN & Co., LIMITED, London, Sept. 24, 1894.—The wheat trade has ruled extremely dull since our last report. The decrease of 2,000,000 quarters in the quantity afloat for the United Kingdom has failed to have the slightest effect on buyers, who maintain their cautious attitude, no doubt in view of another large Argentine crop looming in the future. ENGLISH WHEAT.—In the country markets the supply of new English wheat continues liberal, but the condition generally is very poor, and there is no change in prices since our last. FOREIGN WHEAT.—Business continues very limited, the chief demand being from France for coast cargoes. French millers being forced to buy dry foreign wheat to mix with the damp home-grown. The following are the c. i. f. prices paid during the week: La Plata sailer cargoes 19s 6d. South Australian 22s 6d for Ireland. Russians. A cargo of Azov Black Sea Azima on good sample sold at 20s 3d. Azov Crimean Azima cargo 20s. Azov Black Sea Ghrka parcels 19s 6d. American Red Winters offering in any position at 20s. Hard Duluth, dull; 22s 6d taken for parcel September-October shipment. Canadian. Hard Manitobas, quiet. Business in new crop has been done during the week at 22s 10d. Sellers to-day ask 22s 7d, but no buyers. BARLEY.—English malting barley is in more request, but unfortunately the bulk is in poor condition. Russian grinding barley is freely offered but meets with little demand even at 11s per quarter c. i. f. MAIZE.—Has ruled lower, but closes to-day steady at the decline. For Odessa September-October shipment there are sellers at 19s 6d c. i. f. for cargoes or 19s to 19s 3d for parcels. Mixed American is quoted at 23s. OATS.—Quiet with prices favoring buyers. There is little doing for shipment owing to sellers asking prices above buyers' ideas. PEAS.—Sellers of White Canadian have further reduced their limits to 24s 6d c. i. f. No. 2 Australian on passage is offering at 23s 3d. Green Calcuttas are unchanged. HAY.—In foreign hay there is no inquiry for shipment, business being confined to stuff arriving or arrived, for which values are unchanged.

The Union Pacific Railway has offered to transport free of charge all seed wheat used by destitute farmers in Kansas west of Ogallah and Plainville. This wheat will be carried from territory west of Manhattan. The agents of the company are directed to collect freight charges if they think the liberality of the railway company is being taken advantage of for the purposes of gain.

RICE IMPORTS AND EXPORTS.

According to the last report of the Bureau of Statistics rice aggregating 1,124,300 pounds, valued at \$49,414, was imported free of duty under reciprocity treaty with Hawaiian Islands during August, against 129,500 pounds, valued at \$4,305, in August preceding; and during the eight months ending with August 6,517,200 pounds, valued at \$255,594, were imported, against 2,954,800 pounds, valued at \$107,632, imported during the corresponding months of the year preceding.

Of rice imported free of duty none was exported in August, against 625 pounds exported in August, 1893; and during the eight months ending with August 210 pounds were exported, against 6,516 pounds exported during the corresponding months ending with August, 1893.

Dutiable rice aggregating 5,548,792 pounds, valued at \$89,750, was imported during August, against 4,044,628 pounds, valued at \$63,172, in August preceding; and during the eight months ending with August 73,408,567 pounds, valued at \$1,098,007, were imported, against 45,670,543 pounds, valued at \$755,998, imported during the eight months ending with August preceding. Of dutiable rice we exported 939,923 pounds, valued at \$13,890, during August, against 1,100,554 pounds, valued at \$19,187, in August preceding; and during the eight months ending with August 7,895,053 pounds, valued at \$130,807, were exported, against 7,678,179 pounds, valued at \$143,352, exported during the eight months ending with August preceding.

Rice flour, rice meal and broken rice amounting to 7,207,042 pounds, valued at \$103,113, was imported during August, against 5,016,924 pounds, valued at \$76,030, in August, 1893; and during the eight months ending with August 42,296,569 pounds, valued at \$614,052, were imported, against 43,354,111 pounds, valued at \$723,747, imported during the corresponding months ending with August, 1893. Of imported rice flour, rice meal and broken rice 987 pounds were exported during August, against none in August preceding; and during the eight months ending with August 987 pounds were exported, against none exported during the corresponding months of the year preceding.

LOCATIONS FOR FACTORIES.

The name of the Chicago, Milwaukee & St. Paul Railway has long been identified with practical measures for the general upbuilding of its territory and the promotion of its commerce, hence manufacturers have an assurance that they will find themselves at home on the company's lines.

The Chicago, Milwaukee & St. Paul Railway Company owns and operates 6,150 miles (9,900 kilometers) of railway, exclusive of second track, connecting track or sidings. The eight states traversed by the lines of the company, Illinois, Wisconsin, Northern Michigan, Iowa, Missouri, Minnesota, South Dakota and North Dakota, possess, in addition to the advantages of raw material and proximity to markets, that which is the prime factor in the industrial success of a territory—a people who form one live and thriving community of business men, in whose midst it is safe and profitable to settle. Many towns on the line are prepared to treat very favorably with manufacturers who would locate in their vicinity.

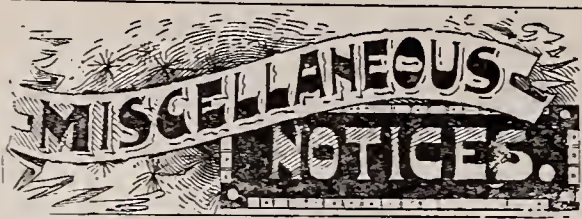
Mines of coal, iron, copper, lead and zinc, forests of soft and hard wood, quarries, clays of all kinds, tan-bark, flax and other raw materials exist in its territory in addition to the vast agricultural resources.

A number of new factories have been induced to locate—largely through the instrumentality of this company—at towns on its lines. The central position of the states traversed by the Chicago, Milwaukee & St. Paul Railway makes it possible to command all the markets of the United States. The trend of manufacturing is westward. Nothing should be permitted to delay enterprising manufacturers from investigating. Confidential inquiries are treated as such. The information furnished a particular industry is reliable. Address

LUIS JACKSON,
Industrial Commissioner, C., M. & St. P. R'y.
425 Old Colony Building, Chicago, Ill.

John Hill Jr. has in his possession the smallest warehouse receipt on record. It is for 46 pounds No. 2 corn, and was issued at Chicago Aug. 14, 1886, by Dole & Co., who ran the elevators on the Burlington system previous to Armour & Co. The storage on this corn for the past eight years is more than double the present price of the corn.

The shipper is merely deluding himself unnecessarily when he hopes to obtain a higher classification for his hay than it will manifestly grade in the regular markets of the country. While there is not in the strict sense absolute uniformity in grading at principal receiving points, there is a sufficient uniformity to preclude the possibility of packing straw being received for No. 1 timothy. But we have seen claims made by shippers as to grade which would leave the impression that the contrary were the rule and not the exception.—*Hay There.*



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

GAS AND GASOLINE ENGINES.

We can make specially low prices on gas and gasoline engines of from 1 to 5-horse power. Address COLBORNE MFG. CO., 31-41 East Indiana street, Chicago.

CORLISS ENGINE WANTED.

A 12x36 Corliss Engine complete wanted. It must be in first-class condition and practically as good as new. Address

KELLY BROS., Edgerton, Kan.

DAVIS GRAIN TABLES.

The value of wheat or any grain at 60 pounds to the bushel, for any amount less than 100 bushels is shown without addition or multiplication, and for any amount over 100 and under 1,000 bushels, with but a single addition: at any price from 25 cents to \$1.25 per bushel. The value of bushels and pounds of other grain also is shown at 56, 48 and 32 pounds to the bushel at any price from 15 cents to \$1.50 per bushel. Price, postpaid, \$1.25. Address

E. D. DAVIS, 520 Nicollet Ave., Minneapolis, Minn.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

CLIPPER AND DUST COLLECTOR.

One No. 4 Eureka Oat Clipper and one Cyclone Dust Collector for sale. Both in good condition. Address WHITE & YOUNG, Stillman Valley, Ill.

PATTERNS FOR GAS ENGINES FOR SALE.

For Sale—The complete patterns for 4 sizes of gas and gasoline engines all ready for the market. Over 25 already three years in use. Good testimonials. See them running. If you mean business address

GAS AND GASOLINE ENGINES, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

GRAIN ELEVATOR FOR SALE.

Steam power grain elevator on Chicago & Alton Railroad in Missouri for sale. Convenient to Chicago, St. Louis and Kansas City. Corn sheller, scales, offices, etc., complete. Good opening for lumber business in connection. Splendid grain country. Healthy location. Now in operation and rented to good advantage. Would accept other good property in part payment. Address

J. G. M., Box 656, Washington, D. C.

JENNINGS' CIPHER CODE.

Jennings' N. E. Telegraph Cipher contains many novel ideas, and is complete with instructions as to buying, selling, ordering, market advices, offers, bids, finance, bill lading, instructions, freight inquiries and advices, shipping inquiries and instructions, guaranteeing, etc., such as no other cipher contains. It will save you 25 to 50 per cent. more than any other code on your New England business; also giving names and addresses of 1,400 New England carload buyers. Send for circular issued March 1 giving names of firms up to date using the cipher and recommending it to the trade. Cost \$3, sent postpaid on receipt of price. Address

HENRY JENNINGS, 613 Chamber of Commerce, Boston, Mass.

FOR SALE.

THREE GRAIN ELEVATORS

In Western Iowa on C. & N. W. R. R.

MARTIN D. STEVERS & CO.

COMMISSION MERCHANTS,

218 La Salle St., - CHICAGO.

BAGS! BAGS!!

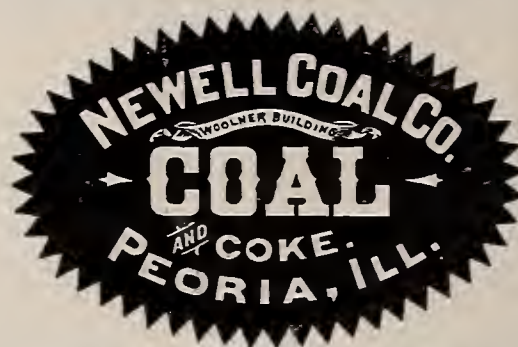
For Grain or Anything.

Burlaps and Cotton Bags, Twine, etc.

Manufactory and Office:
Near Board of Trade,

W. J. JOHNSTON, 182 Jackson Street, CHICAGO, ILL.

ORDER YOUR COAL FROM



CHICAGO OFFICE, 355 Dearborn Street.

COMMISSION CARDS.

W. F. JOHNSON.

F. J. SCHUYLER.

W. F. JOHNSON & CO.,

Grain, Seed and Provision

COMMISSION MERCHANTS

Room 59 Board of Trade, CHICAGO.

Rooms 406-408 Corn Exchange, MINNEAPOLIS.
Room 317 Chamber of Commerce, ST. LOUIS.
Room 23 Chamber of Commerce, MILWAUKEE.

Address all Correspondence to and make all Drafts on Chicago.

Robert McKnight & Sons,

COMMISSION MERCHANTS,

AND DEALERS IN

GRAIN, FEED AND HAY,

2106 and 2108 Market Street. - PHILADELPHIA

REFERENCES: { Merchants' and Third National Banks,
PHILADELPHIA.

COLLINS & Co.,

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

CINCINNATI, OHIO.

Grain for Seed, Feed and Milling.

E. R. ULRICH.

E. R. ULRICH, JR.

E. R. ULRICH & SON,

Western Grain Merchants

And Shippers of Choice Milling White or Yellow Corn,

Also Mixed Corn, White Oats, Mixed Oats and Choice Red Winter Milling Wheat. Elevators and Storage along the Line of Wabash Ry., J. S. E. Ry., C. & A. Ry., and St. L. C. & C. P. Ry. in Central Illinois.

Office, Sixth Floor, Illinois National Bank.

SPRINGFIELD.

ILLINOIS.

We use Robinson's or Jennings' Cipher.

COMMISSION CARDS.

ESTABLISHED 1865.

L. Everingham & Co.,Rooms 84, 85 and 86 Board of Trade,
CHICAGO, ILL.**COMMISSION MERCHANTS.**

Liberal Advances made on Consignments.

GRAIN AND SEEDS of all kinds SPECIALTIES.
Special Department for HAY AND STRAW.

Milwaukee, Wis.	} BRANCH OFFICES:	Cincinnati, O.
Minneapolis, Minn.		Philadelphia, Pa.
Peoria, Ill.		New York, N. Y.

Consignments may be made to us direct to these points, addressing all Drafts, Bills of Lading and correspondence to our central office, Chicago.

SHIP YOUR GRAIN

TO

P. B. & C. C. Miles,**COMMISSION MERCHANTS,**
PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES.
QUICK RETURNS.

REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan & Trust Co., Peoria.

H. B. SHANKS. Established 1873. S. H. PHILLIPS.

Shanks, Phillips & Co.,**COMMISSION MERCHANTS,**

HAY, CORN, OATS, BRAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank. Cash advances on B. of L.

**F. H. PEAVEY & CO.,**

Minneapolis,

Minn.

GRAIN RECEIVERS.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

E. L. ROGERS & CO.,

ESTABLISHED 1863.

COMMISSION MERCHANTS,

GRAIN, Flour, Seed, Hay and Straw.

135 S. Second St., (Chamber of Commerce) PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished gratuitously on application. Correspondence solicited.

References: { Corn Exchange National Bank,
Manufacturers National Bank,
Merchants National Bank.**Muhle & Herz,**

HAMBURG, GERMANY.

AGENTS

Corn, Grain, Flour,

Provisions, Mill Feed.

Correspondence Solicited from Exporters and Shippers.

BUY YOUR GRAIN

FROM

SUFFERN, HUNT & CO.,

ROOMS 10 AND 11 FENTON BLOCK,

DECATUR, - ILLINOIS.

We make a specialty of White and Yellow Corn for milling purposes. We also handle mixed Corn, white and mixed Oats, Mill Feed and Hay. Can ship any line. We want your business. Send for prices.

COMMISSION CARDS.

J. J. BLACKMAN.

G. W. GARDINER.

J. J. Blackman & Co.,**COMMISSION MERCHANTS,**

WHEAT, CORN, OATS, BRAN, MIDDINGS, SCREENINGS, HAY, SEEDS, BEANS, PEAS AND CORN GOODS.

95 Broad Street, Rooms 604 and 605, - NEW YORK.

GEO. N. REINHARDT & CO.,

Melrose Station, New York City.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.Storage capacity, 8,000 bales, 30,000 bushels.
Let us know what you have to offer.**D. G. Stewart,****GRAIN AND COMMISSION.**

Proprietor IRON CITY GRAIN ELEVATORS.

Capacity, 300,000 Bushels.

LIBERAL ADVANCES ON ALL CONSIGNMENTS.
CORRESPONDENCE SOLICITED.OFFICE, 1019 Liberty Street, - PITTSBURGH, PA.
ESTABLISHED 1871.

T. D. RANDALL.

ESTABLISHED 1852.

GEO. S. BRIDGE

T. D. Randall & Co.,**GENERAL COMMISSION MERCHANTS,**

GRAIN, HAY AND FLOUR,

219 South Water Street, - CHICAGO.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. Bartlett & Son,**GRAIN AND PRODUCE COMMISSION MERCHANTS.****BARLEY A SPECIALTY.**Room 23 Chamber of Commerce Bldg.
Milwaukee, Wis

Careful attention given to orders from Brewers, Maltsters and Millers.

G. H. D. JOHNSON.

E. P. BACON.

G. W. POWERS.

E. P. BACON & CO.,**Grain Commission Merchants**

Consignments may be made to us either at Milwaukee, Chicago or Minneapolis, and drafts may be made on us at either place without regard to the destination of consignments against which they are made.

No. 17 Chamber of Commerce, Milwaukee.

Branch Offices:

84, 85 and 86 Board of Trade,
CHICAGO, ILL.30 Chamber of Commerce,
MINNEAPOLIS, MINN.

Established 1879.

J. F. ZAHM & CO.**Grain and Seeds,**

33 Produce Exchange, Toledo, Ohio.

No. 8 Board of Trade, Detroit, Mich.

COMMISSION CARDS.**John W. Barwell & Co.,**

16 Pacific Avenue, Chicago

JOBBER OF

ALL KINDS OF MILL FEEDS.

Cash paid for round lots of Bran, Middlings, Shorts, Corn Meal, Corn and Oat Chop, Gluten Meal, Old Process Linseed Oil Meal, New Process Linseed Oil Meal, Cotton Seed Meal, Rye Feed, Red Dog Flour, Oat Feed, etc. Write us before buying or selling.

PROMPT—CAREFUL—SATISFACTORY.

Moffatt & Lee Commission Co.,**RECEIVERS AND SHIPPERS OF GRAIN.**Rooms 509 510, 511
Exchange Bldg., KANSAS CITY, MO.REFERENCES: { First Natl. Bank, Metropolitan Natl. Bank, Inter-State Natl. Bank, National Bank of Commerce,
National Bank of Kansas City.Owners and Operators of the NATIONAL ELEVATOR
(Capacity 100,000 Bushels).**PAINE BROTHERS,***Grain Merchants,*

28 CHAMBER OF COMMERCE,

MILWAUKEE, WIS.

Lessees of C., M. & St. P. Elevator Co.

**BUY and SELL OUTRIGHT.****OATS**

We deal very largely in Oats and Barley, shipping by cargoes, and also handle considerable quantities of Wheat.

BARLEY

We have special facilities for drying damp grain, and are always ready to buy low-grade Wheat, Barley or Oats, as well as Barley

WHEAT**BARLEY SCREENINGS**

Screenings and Wheat Screenings.

DAMP GRAIN

We are always ready to make cash bids, free of commission,

DAMAGED WHEAT

on samples, and will pay sight draft against

FIRE BURNT GRAIN

railroad receipt for 3/4 value, making final

WHEAT SCREENINGS

returns next day after shipment arrives.

MILL FEEDS

We buy west and north of Chicago, and sell east and south of Chicago.

Send us samples, quoting prices on anything you have to offer; or we will submit bids, if requested.

Milwaukee weights and inspection to govern all transactions when shipments touch this point.

We can handle goods over Northwestern Line, and most other roads, as readily as over the C., M. & St. P.

Unquestionable references furnished on request.

==PAINE BROS.,==

28 Chamber of Commerce, MILWAUKEE, WIS.

The Incline Elevator and Dump.

Patented April 3, 1894.

It is **THE NEW WAY** of elevating ear corn, shelled grain or minerals into car or storage bin.

Its cost is so small that it is practical for farm use.

Its pulley blocks are roller bushed and steel, reducing friction to a minimum.

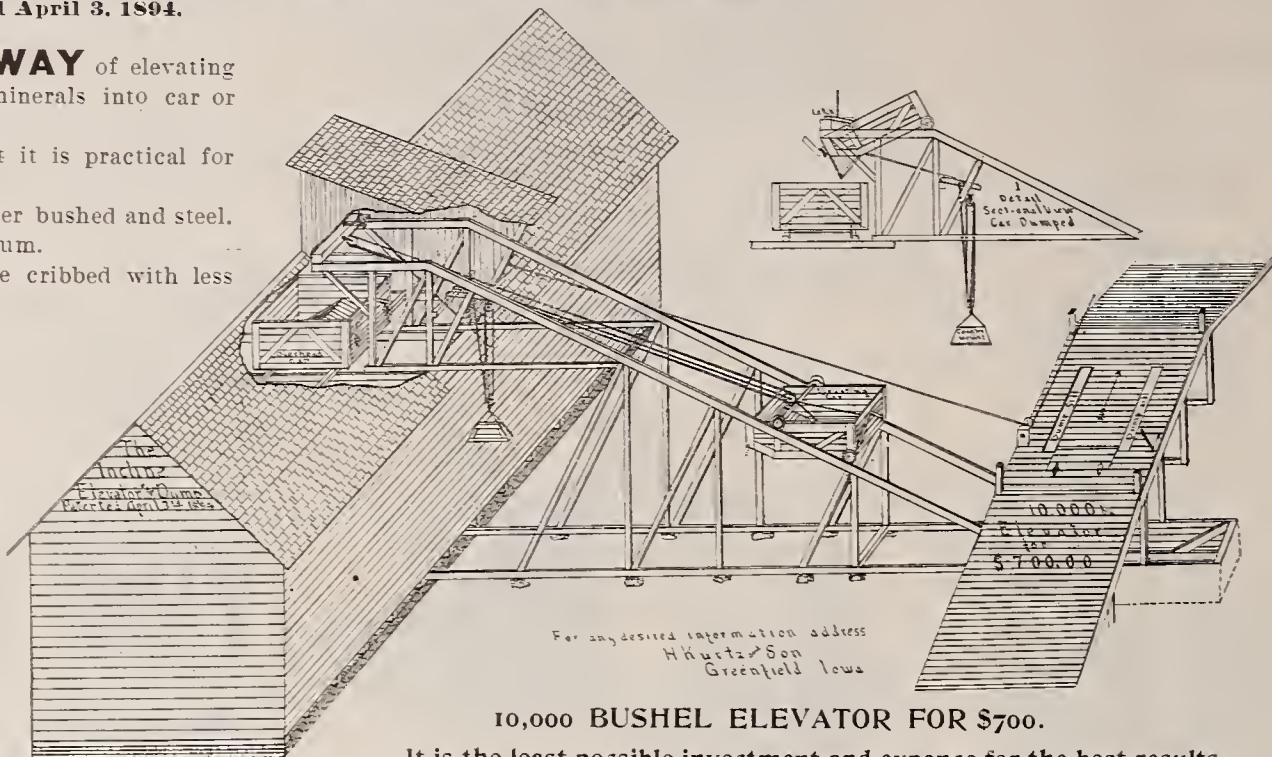
With it ear corn can be cribbed with less expense than with a scoop if cost of storage is considered.

With it a grain dealer's elevator has the following advantages:

Every team elevates its own load, thereby the power for elevating is obtained without cost.

A whole load is dumped at a time, making it practical to use an overhead car by which at the same cost you obtain more shipping bin capacity alone than all the storage and shipping bin capacity of a belt elevator.

Cleaning machinery can be adjusted with unusual convenience.



10,000 BUSHEL ELEVATOR FOR \$700.

It is the least possible investment and expense for the best results.

For any desired information address **H. KURTZ & SON, Greenfield, Iowa.**

A NEW plan of chute, leading from shipping bin to railroad car, is used, through which either ear corn or shelled grain will pass equally well. The overhead car having a capacity of 100 bushels can be completely filled without moving.

A safety ratchet holds the car at the top, and the teamster can unfasten rope without getting out of his wagon.

Going to Buy a Scale?

If so, read a few opinions of Prominent Elevator People on the Merits of the Demuth Check Beam.

C. A. PILLSBURY, Prest.

G. W. PORTER, Treas. and Mgr.

K. R. GUTHRIE, Secy.

ATLANTIC ELEVATOR COMPANY, Incorporated.

GENERAL GRAIN DEALERS. Elevators on Minneapolis, St. Paul and Sau't St. Marie Ry.

J. A. DEMUTH Esq., Oberlin, O.

MINNEAPOLIS, MINN., May 25, 1893.

DEAR SIR:—Replying to yours of the 22d, would say that we have the Check Beams on twelve (12) scales in our Atlantic "A" elevator, and like them very much. We find them a valuable check on the weighman, and good for reference to check up with. Yours truly,

K. R. GUTHRIE, Secy.

NEW YORK CENTRAL LIGHTERAGE CO.

NEW YORK CENTRAL ELEVATORS.

Gibson L. Douglass, Mgr.

WEST SHORE ELEVATOR.

1 and 13 Beaver Street.

J. A. DEMUTH, Esq.,

NEW YORK, May 26, 1893.

DEAR SIR:—We are using nineteen "Check Beams" on the Fairbanks scales at N. Y. C. & H. R. R. elevator, and sixteen at the West Shore R. R. elevator. Have discovered a number of errors through their use during the past two years, and consider them a good thing. Yours truly,

G. W. PHILON, Supt.

ARMOUR ELEVATOR CO., Rooms 1111 and 1112, 205 La Salle Street.

Elevators on C. M. & St. P. Ry., and C. B. & Q. Ry., Chicago.

Total Capacity 9,000,000 Bushels.

J. A. DEMUTH, 40 Elm Street, Oberlin, Ohio.

CHICAGO, May 26, 1893.

DEAR SIR:—Yours of the 22d inst in reference to Check Beams in use on our Fairbanks scales I would say that we have in use 35 of the Check Beams on scales at our elevators, and consider them invaluable for accurate weighing. Yours very truly,

ARMOUR ELEVATOR CO.

PADDOCK, HODGE & COMPANY,

GRAIN MERCHANTS.

29 and 30 Produce Exchange.

TOLEDO, OHIO, June 28, 1893.

J. A. DEMUTH & CO., Oberlin, O.

DEAR SIR:—In reply to your favor of a recent date: We have had our Fairbanks scales supplied with your double entry system since last November, and in errors detected and corrected, for and against us, it has more than paid for itself, to say nothing of the satisfaction of knowing that our weighman's entries are absolutely correct after they have been balanced up by your system. Yours truly,

JAMES HODGE, Secy and Treas. Toledo Elevator Co.

Furnished only with Fairbanks Scales

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The Central Elevator of Pittsburg, Pa., is for sale or lease on favorable terms. The storage capacity is 250,000 bushels, equipped with Corn Sheller, Grain Cleaner, Steam Shovels, and three (3) Portable Chopping Mills. This Elevator is situated in the midst of a compact population of 500,000 persons, and is connected East and West with all the tracks of the Pennsylvania system. The demand for chopped feed is very great in this locality. For a good live man with some capital there is a splendid opportunity. Good reasons given for selling. For further information address,

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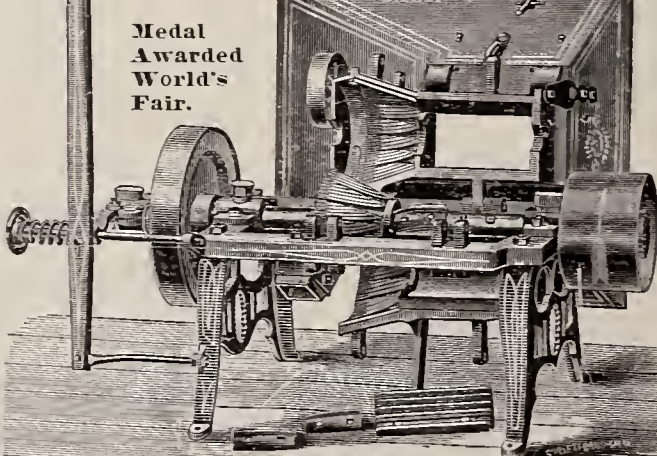


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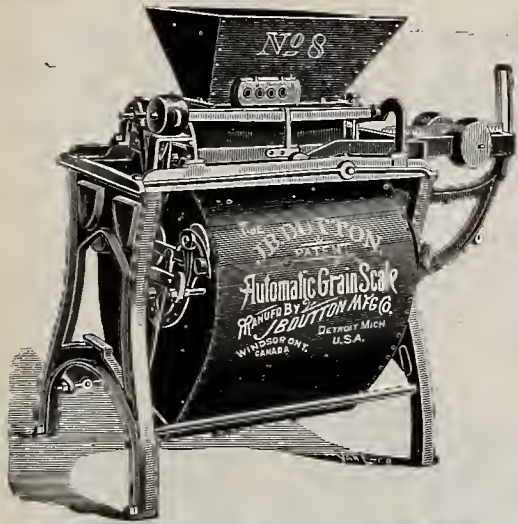
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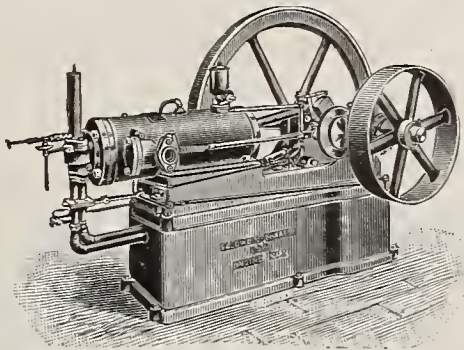


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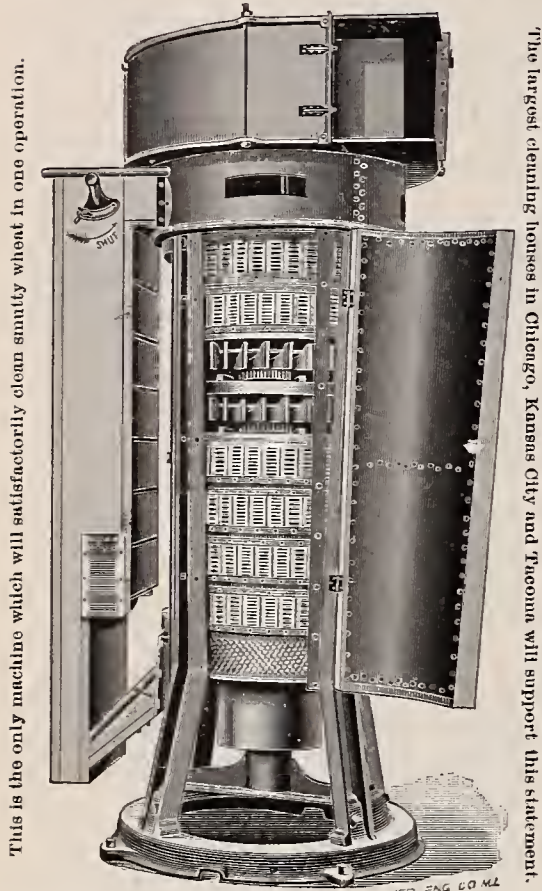
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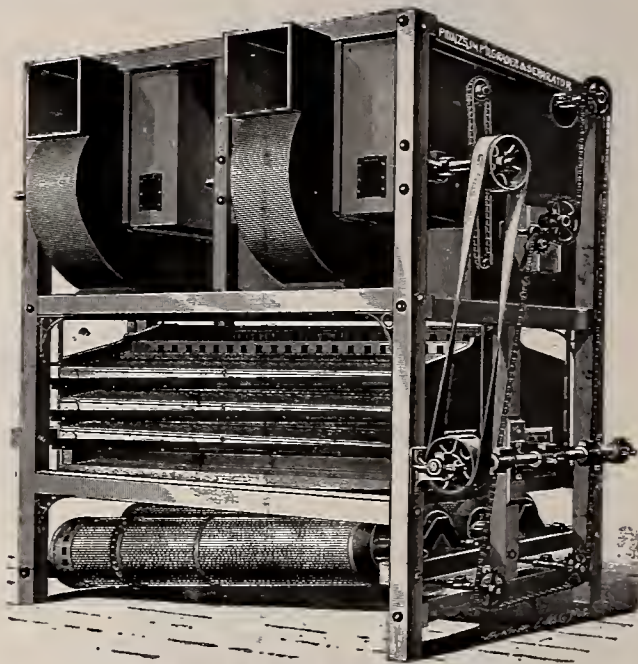
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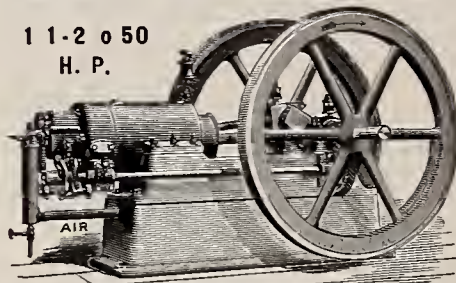
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THE SIMPLEST ENGINE IN AMERICA.

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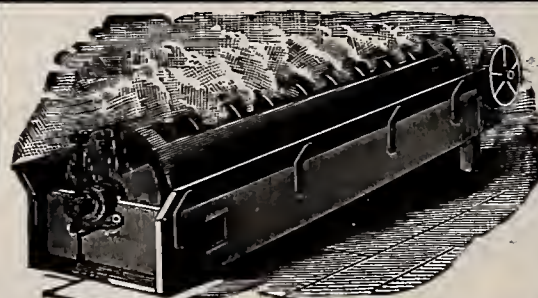
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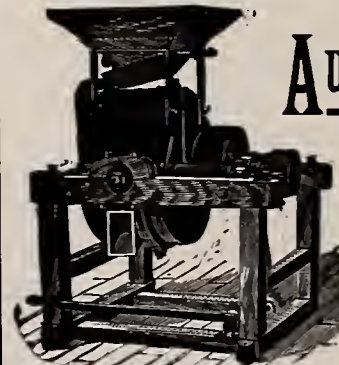


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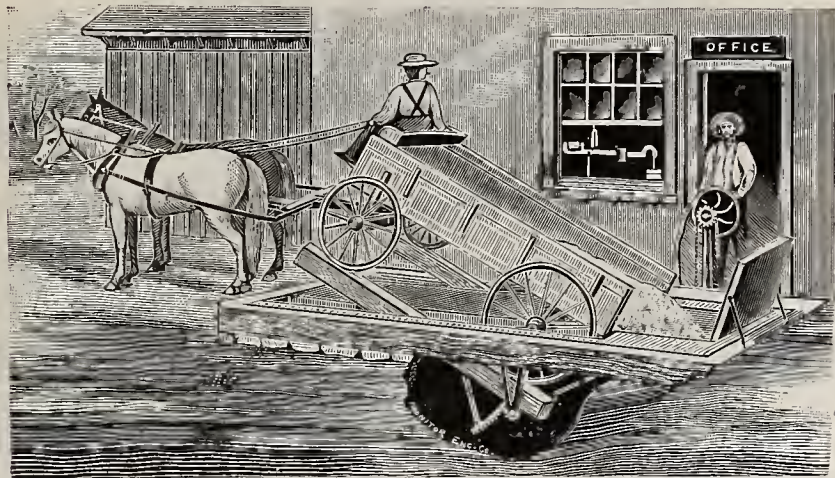
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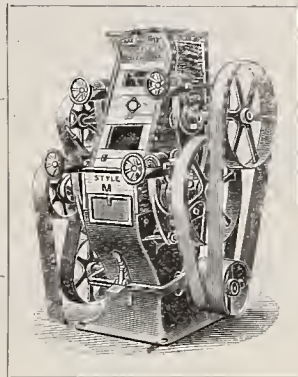
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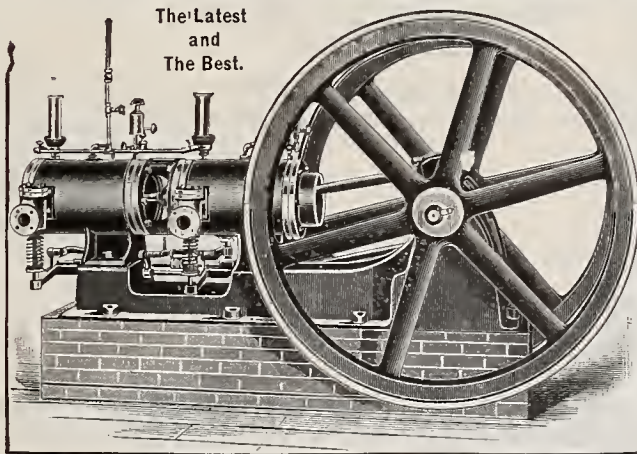
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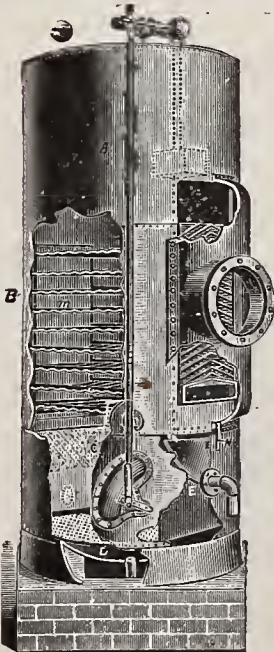
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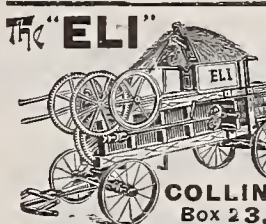
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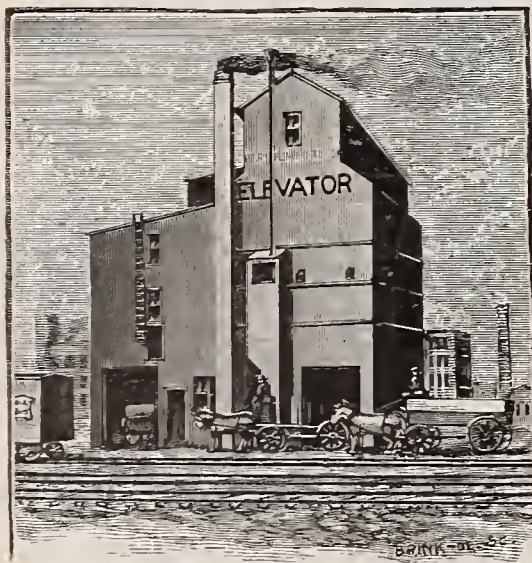
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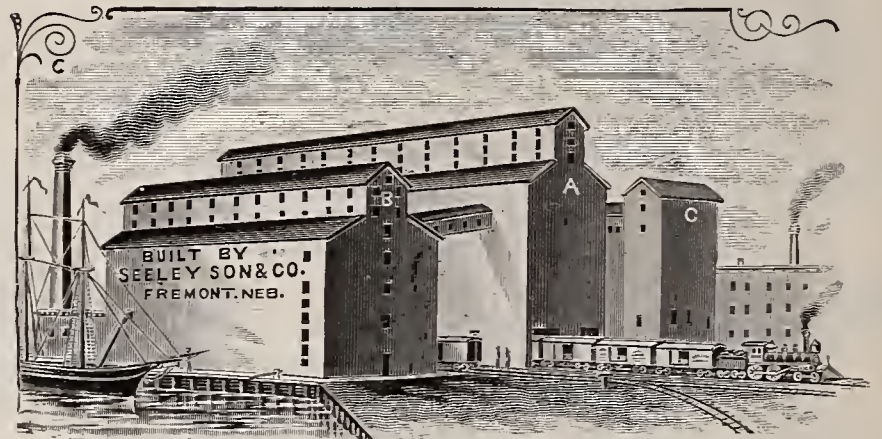
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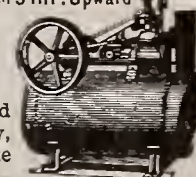
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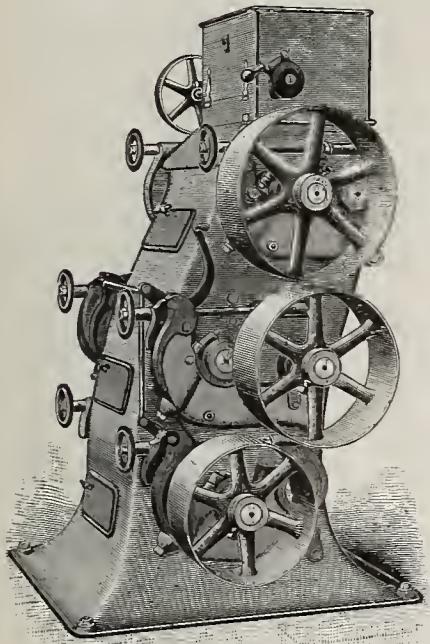
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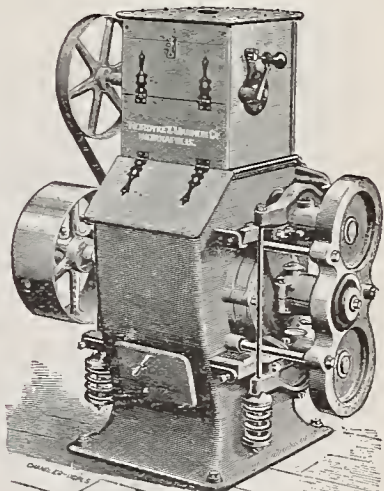
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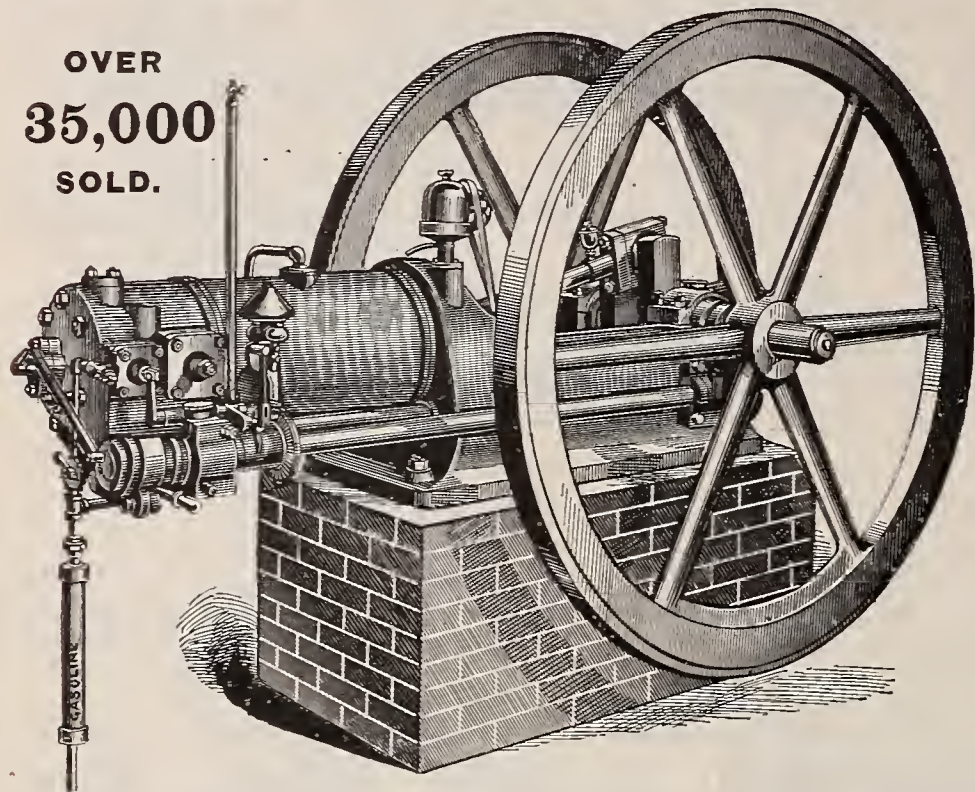
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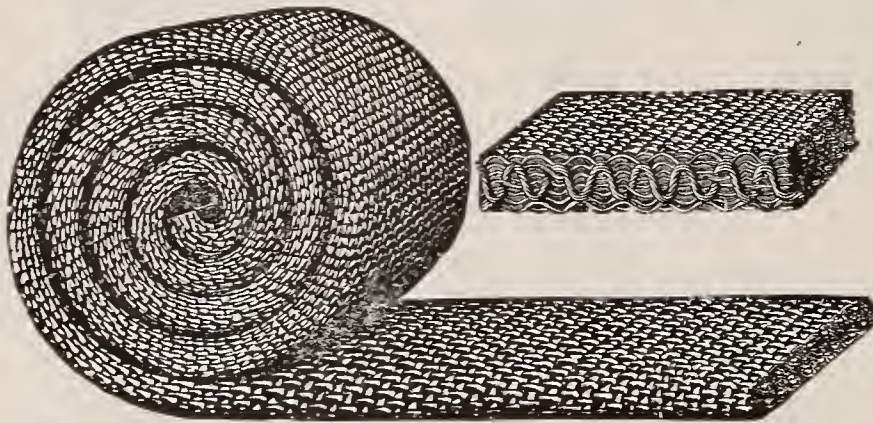
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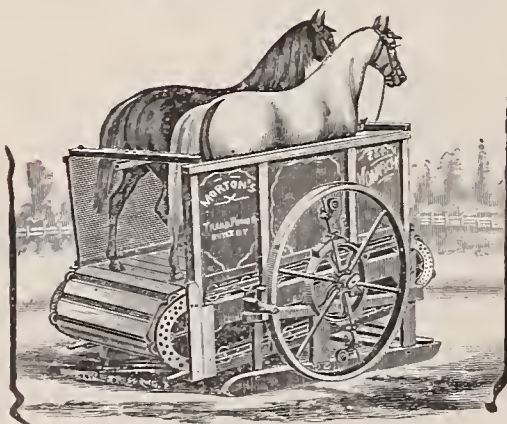
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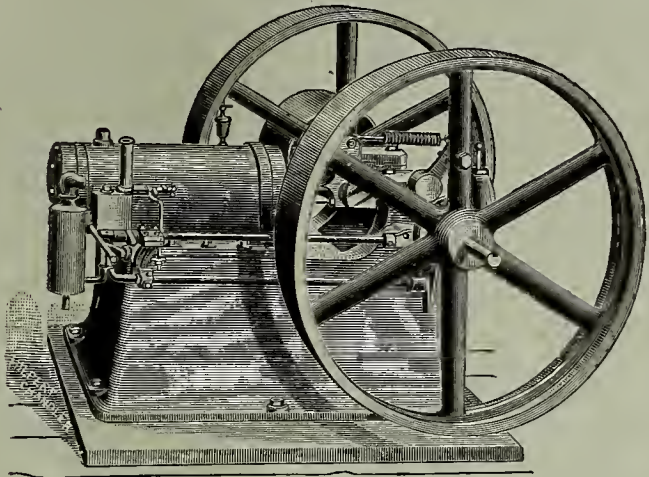


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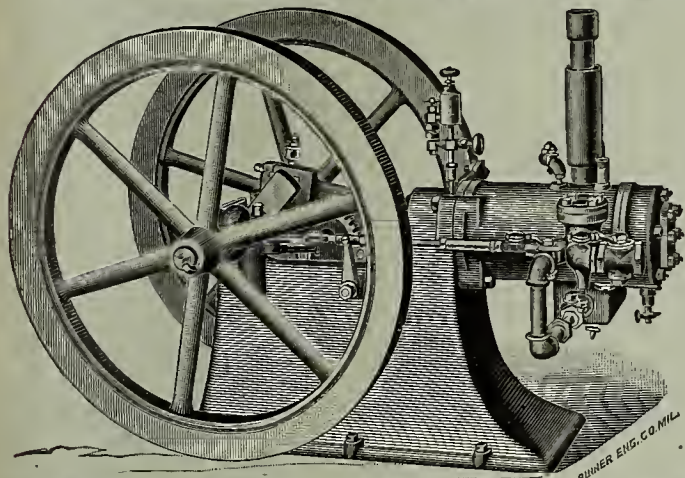
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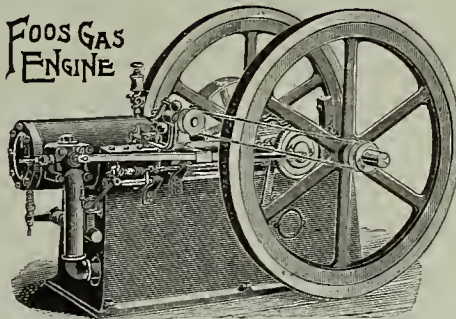
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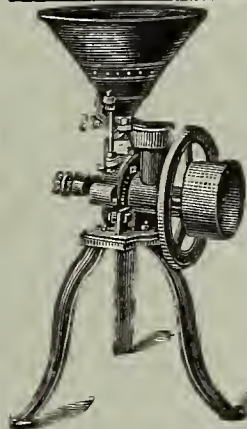


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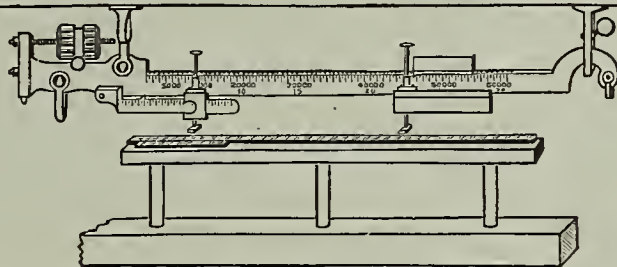
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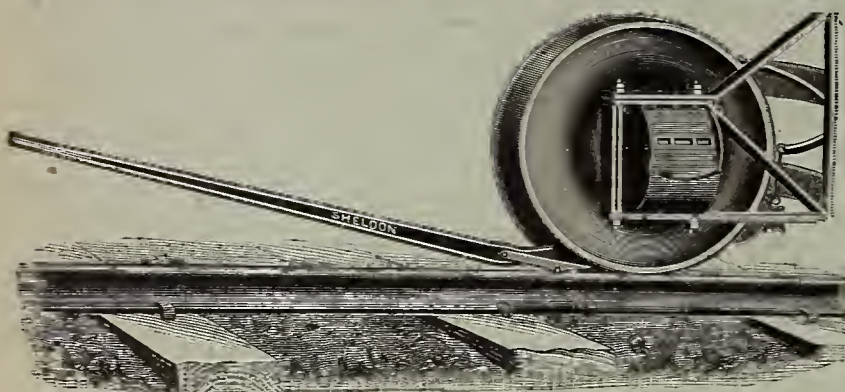
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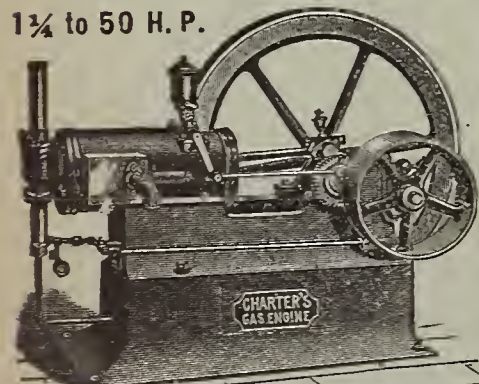
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